# The Iron A

INDEX TO READING MATTER PAGE 28.

A Review of the Hardware, Iron and Metal Trades.

ADVERTISMENTS. PAGE 29.

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#### Tweddell's Portable Hydraulic Riveting Machine.

We illustrate this week a novel and ingenous arrangement of a portable riveting machine and crane on Mr. R. Tweddell's well known system. The machine in question, as described in *Engineering*, forms only a part of a very complete traveling plant designed and manufactured by an English firm, and the arrangement consists of a designed and manufactured by an Edgester firm, and the arrangement consists of a trolley or carriage, upon which is mounted a crane carrying the riveting machine. By means of a cross gantry the latter is able to be moved in a transverse direction during the time the machine is engaged riveting. The trolley retires as the construction of the structure progresses; the connection with the pressure main is never interrupted, as the flexible pipes and swivel joints allow for any change of position; a hydraulic chainlift adjusts the position of the machine vertically. On the same trolley is also mounted a reverberatory rivet heating furnace, which tically On the same trolley is also mounted a reverberatory rivet-heating furnace, which enables a considerable quantity of rivets to be always ready The portable riveting machine has a gap of 42 inches, and is capable of closing rivets of 1 inch diameter. The riveting machine, as shown, is in the proper position for riveting up the floor-plates

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proper position for riveting up the floor-plates of bridges; it is, however, obvious that the machine can be used with a lever, vertically or horizontally or at any intermediate angle. In addition to the crane and riveter illustrated, a motive-power trolley is supplied, on which is fixed the steam engine, boiler, accumulator and the pumps. Supplied from this same power trolley are also other travelers carrying spare riveters for different parts of the girders. The object of thus subdividing the plant is, of course, to minimize as much the plant is, of course, to minimize as much as possible the load to be carried by the girders during construction; otherwise the principle is the same as that used by Mr. Tweddell in conjunction with Messrs. Fielding and Platt, of Glouceser, the builders many years ago on similar work in Eugland.

#### METALLURGICAL NOTES.

#### A New Method for the Extraction of Selenium.

The following is the translation of an article written by M. P. Kienlen, which was published in Bulletin de la Société Chemique de Paris: The increased demand for selenium in con-

nection with the microphone and similar inventions makes the discovery of a new supply of this substance a most important one it is well known that selenium, which is one of those elements so seldom found in nature of those elements so seldom found in nature, is not directly extracted from the natural selenides which in minute quantities accompany the sulphides found in certain districts, but, rather, it is isolated from various secondary products of industrial chemistry in which this metalloid accumulates. Among the products which the technical works make special ways to are the dust from the special mention of are the dust from the roasting of selenium minerals in metallurgical roasting of selenium minerals in metallurgical establishments, and the deposits which are formed in the lead chambers of sulphuricacid factories, in which pyrites containing traces of selenium have been treated. The great chemical industry contains, however, still another product which is very rich in selenium, and I am sure it will be immediately recognized by chemists who are occupied in the manufacture of chemical products. I refer to the deposit which is formed in the condensation bottles of hydrochloric acid. It results from the volatilization of selenium contained in the sulphuric ization of selenium contained in the sulphuric acid used for the decomposition of salt. Among the larger factories of chemical products, the acid generally used for this purpose is derived from the glover's tower, and a sufficiently strong proportion of iron renders it undesirable for the manufacture of concentrated acid. In the glover's tower selenic acid coming from the roasting the pyrites is reduced by the sulphurous acid into selenium, which is in part dissolved in the acid and partially remains suspended in the mass. The proportion of selenium retained in this way in the acid is often sufficient in quantity to communicate to the acid a very pronounced blood-red coloration; such would be the case with an acid made from the pyrites of Sain Bel, near Lyons, France. The estimation of selenium in such acid may be easily made when a sufficient quantity is used for the determination : three imes its volume of water is added, and then it is allowed to slowly evaporate in a warm place. The clear liquid is decanted by means of a syphon; the selenium precipitated is collected on a tarred filter, and washed and dried in an oven at 100° C. From analyses made on the Glover acid

and on the chamber acid, the following results were obtained :

ned :

Glover Acid.

1.006 (54°5 Beaumé)

0.0283 Grams

0.0176 Selenium in 1 liter...... Selenium to the 1000 grams. Chamber Acid.

Selenium in 1 liter.... Selenium to the 1000 grams. found in quite appreciable quantities in the commercial acids. The selenium, becoming volatile at a dark-red heat, is carried over

These estimations show that the selenium is with the hydrochloric acid vapors during the calcination of the sulphate in the mufflers, and is deposited in the first condensing flasks of the acid. It sometimes happens flasks of the acid. It sometimes happens hat the hydrochloric acid is so strongly

The very abundant deposit which is formed in the condensation bottles is found to re-The very abundant deposit which is formed in the condensation bottles is found to resemble brick-red clay, becoming black as it is dessicated. Selenium is found mixed with a strong odor of sulphurous acid is given off. The metalloid, which is of a magnificent crimson-red color, is precipitated in large flakes, and collects together into a magnificent crimson red color, is precipitated in large flakes, and collects together into a mass reflecting a bronze tint. It is then brought bottles. From a number of analyses made of the refuse dried at 100° C, the proportion of selenium was found to vary from 41 to 45 per cent. The estimation was performed in the following manner:

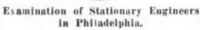
| vessels by the acid sulphite of sodium, which is added until a strong odor of sulphurous acid is given off. The metalloid, which is of a magnificent crimson-red color, is precipitated in large flakes, and collects together into a mass reflecting a bronze tint. It is then brought to boiling by means of steam; the prepensions on the subject may have been recated among consumers. Two well-known chemists thought they had proved that Wolf-the vessel, and contracts in the form of a steel-gray mass having a spongy appearance. The selenium thus obtained is washed,

the selenious acid to selenic acid with the evolution of chlorine. Returning to the treatment of the substance itself, the selenium is thrown down in large earthenware vessels by the acid sulphite of sodium, which

Opinions are divided as to the merits of Wolfram steel, although some important practical authorities recognize its valuable properties. The partial degree in which this metal has been adopted is attributed to the

charged with selenium that it shows a very beautiful red fluorescence, and that the glass series, which thus becomes the first; the last bottles must always receive the freshests and for the removal of the acid best dust. The liquid, which is colored of selenium in such an acid gave me the following results:

In the Badische Gewerbe Zeitung), is Mushet's softest made, in the form of wires, bars, sheets, plates, angles, tees, channels, &c., which are spoken of. It contains up to 8 7 the sted under tensile stress. Cards accompanying each specimen give the elastic and brought to boiling in the presence of an excess of hydrochloic acid, which reduces the selenium acid to selenium acid to selenium acid to selenium acid to selenium acid with the Contraction of area at the fracture; the contraction of area at th extension at 40,000, 50,000, 60,000, 80,000 or 100,000 pounds per square inch, and the ultimate elongation. The collection, moreover, contains specimens of the above materials tested under compression, bending, twisting and shearing stresses, and also samples of copper, copper alloys, steel and iron castings, granite, marble, cement, wood, chains, hemp, manila and wire ropes, and riveted and welded joints, cards with the results of the tests accompanying each. Two somewhat similar accompanying each. Two somewhat similar collections have been supplied by Mr. Kirkaldy to the Imperial College of Engineering,



At the October meeting of the Franklin Institute, Mr. John W. Nystrom read a preamble and resolution concerning compulsory examination of stationary engineers in Philadelphia. On motion of Mr. Nystrom to appoint a committee of five to consider to appoint a committee of five to consider and report upon the resolution, which was carried, the president of the Institute ap-pointed Messrs. Washington Jones, Coleman Sellers, Jr., Thomas Hockley, C. M. Cresson, and John W. Nystrom, chairman. At the November meeting of the Institute a majority of the committee reported as fol-

The committee to whom was referred the matter of memoralizing City Councils on the subject of compulsory examination of en-gineers and firemen report: That in their opinion City Councils have not

power under existing acts of Assembly to pass the ordinance proposed.

WASHINGTON JONES,

COLEMAN SELLERS, THOMAS HOCKLEY.

THOMAS HOCKLEY.

The chairman of the committee declined to sign this report, on the ground that a committee of the Franklin Institute should not give an opinion on law, which should be decided by the City Solicitor. The City Councils, however, have the power to pass the proposed ordinance under existing acts of Assembly.

Mr. M. Eldridge moved the adoption of the majority report, which was lost by a

small majority.

Mr. Nystrom then moved to increase the committee from five to seven, which was carried, and the president accordingly ap-pointed Messrs. W. A. Ingham and Wm. Helm on the committee.

At the meetings of the committee, two of

its members were strongly opposed and raised many objections to compulsory examination of engineers, and in order to remove these objections the chairman of the com-mittee considered it necessary to amend the proposed ordinance, as follows: To the President and Members of the Frank

lin Institute .-- Gentlemen :

PREAMBLE.

Whereas, The city of Philadelphia has suffered a great many disastrous steam-boiler explosions which could have been prevented by proper precautions; and,

Whereas, There are now in use in the city of Philadelphia some 600 boilers which have dangerous flat cast iron heads and other defects: and

fects; and,

Whereas, Any one of these boilers is liable to explode at any moment if in charge of an incompetent hand; and,

Whereas, Such a great number of danger-ous steam boilers cannot reasonably be re-moved without great inconvenience and exto the owners of these boilers

Whereas, It is known that the explosions of this class, as well as of other classes, of boilers have been caused by incompetent attendants; and,

Whereas, It is of equal importance to
examine stationary engineers as it is to
examine steamboat engineers, for the reason

that human life is as precious on land as on water; and, Whereas, It has been demonstrated by ex-

plosions that the object of steam-boiler spection cannot be rendered effective with ut competent attendants; and,
Whereas, It has been proven by ex-

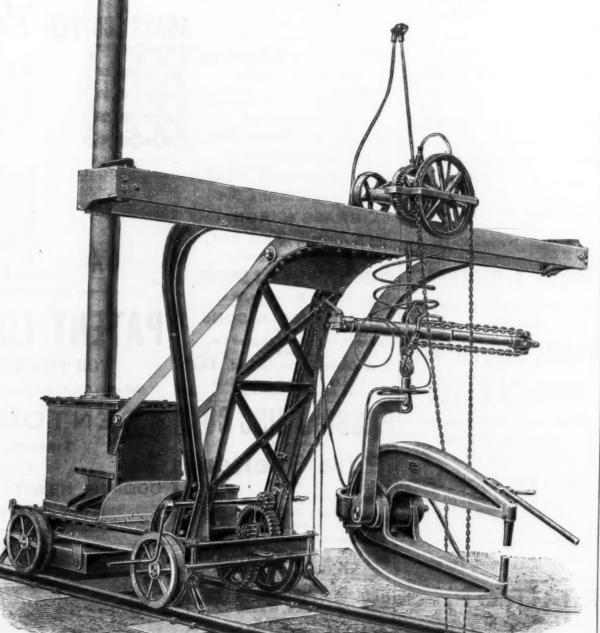
perience that it is necess erience that it is necessary to examine teamboat engineers in order to render

steam-boiler inspection effective; and,
Whereas, It would be of great advantage
to the city of Philadelphia, as well as to the steam users therein, in regard to safety and economy in the working of steam engines and boilers, to elevate stationary engineers examination and grade to the level of steamboat engineers : be it

Resolved, That the mayor and councils of the city of Philadelphia be respectfully requested by the Franklin Institute to pass an ordinance to the following effect, viz.: Supplement to an Ordinance of July 13, 1868,

Supplement to an Ordinance of July 13, 1868, Entitled an Ordinance Regulating the Inspection of Steam Boilers in and for the City of Philadelphia, Fransylvania. Sec. 1. The Select and Common Councils of the city of Philadelphia do ordain, That from and after the 1st day of January, 1884, all engineers and firemen who have charge of stationary steam engines and steam boilers operated in the city of Philade'phia, shall apply to the city chief boiler inspector

(Continued on page 5.)



TWEDDELL'S PORTABLE HYDRAULIC RIVETING MACHINE.

duced into a mattrass having a long neck, diluted with water to which caustic soda had een added until a feeble alkaline reaction was This mixture was then treated in apparent. the cold with bromine, which was added drop by drop, and continually agitated until temperature was no longer increased After a while it was filtered; the filtrate, to gether with the wash water, was brought to boiling with the addition of a small quantity of hydrocloric acid; the selenium was thrown down by the sulphurous acid, collected on a tarred filter and weighed.

For the industrial extraction of selenium from this deposit I made use of the following process: The dust, mixed with water, was treated in the cold with chlorine in a series of large Woulfe bottles. The chlorine was taken directly from one of the leaders of chlorine in the factory, and drawn through by a strong aspiration. The selenium was averted into the ultra-chloride, which in the presence of water became selenious acid; this, when the chlorine is in excess, becomes partially transformed into selenic acid. Fi-nally there is obtained a strong acid solution containing selenious, selenic acid and hydro-

Twenty grams of the dried dust were intro- | dried and then melted in a clay retort ex- | of Hanover, has for several years produced posed to the naked fire, and cast by either ouring in water or into glass molds.

Wolfram and its Alloys. The most important combinations of Wolfram which occur in nature are tunstate of ime or sheelite, as well as Wolframite, which is also designated Wolfram. The last mineral. observes an English exchange, which is also designated Wolfram. The last mineral, observes an English exchange, seems principally to produce Wolframic acid from which the metal is obtained. Wolf-ram has the color of iron, is brittle and so hard that it scratches glass. It has not vet been found possible to melt it. The specific gravity of metal is not soluble in mineral acids, nor even in aqua regia in a cold state, nor in caustic potash lye. It is only soluble in chloride alkalies. At an ordinary temperature the metal is not changed by exposure to the air. One of the combinations of the acid (tungstate of soda) has lately been recommended as a protection for tissues against flame. Although discovered at the end of last century, it was a long time before Wolfram had any technical employment. During the last 30 years it has been used as an alloy for iron and steel. By the melting together of Wolfram and scale a Wolfram Se Cl<sub>4</sub> + 3H<sub>4</sub>O + Ag. = SeO<sub>2</sub>H<sub>1</sub> + 4 ClH of Wolfram, and serves for the manufacture Se Cl<sub>4</sub> + 3H<sub>2</sub>O + Ag = SeO<sub>2</sub>H<sub>3</sub> + 4 ClH of Wolfram steel. In the latter the proportion of Wolfram varies (if the alloy only consists of steel and Wolfram) between .6 per + 2 CH<sub>3</sub> Ag.

When the brick-red color disappears completely from the first bottle, it is withdrawn with the addition of manganese (referred to of steel and iron, from the hardest to the

Wolfram alloys with several metals. Reference is made to a bronze known as Bier mann's Wolfram bronze, costing about 2/ per pound. It contains 95.4 per cent. of copper, 3 per cent. of tin and 1.6 per cent. of Wolfram, is tough, malleable, capable being rolled and of great strength. For working a temperature is required about 180° F. above that required for ordinary bronze. If Wolfram is heated with copper and coal dust in hermetically-closed crucibles, a tough alloy is obtained with 12 per cent. of Wolfram, which is well adapted for axle journals and telegraph wire. In the Journal Mensuel des Travaux de l'Academie Nationale, Dr. Alexander Neujean, of Liége, has recently dealt with the question of alloys of Wolfram with copper, zinc, lead and tin, defining their proportionate composition and the manner of preparing them. According to the journal in question, these alloys possess great toughness, extensibility and hardometimes used as imitations of gold and silver.

We understand that Mr. David Krikaldy is about to send to the Technological and Industrial Museum of New South Wales, at Sydney, a number of cases of specimens illustrative of the mechanical properties of various kinds and qualities of structural materials. The collection consists of over ANSONIA BRASS AND COPPER CO.,

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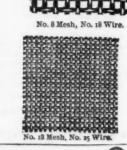
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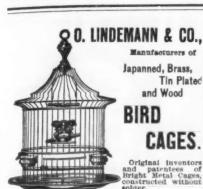
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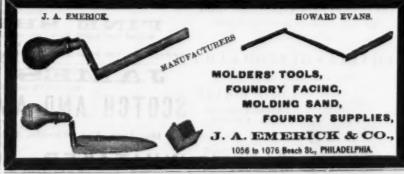
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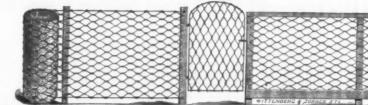
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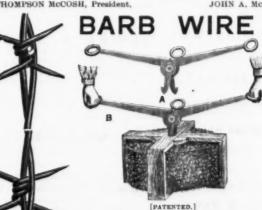
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(Continued from page 1.) for certificate of competency as hereinafter provided.

Sec. 2. The city chief boiler inspector is hereby authorized and required to designate the time and place when and where all ap-plicants for certificates shall be entitled to apply for examination, and shall receive certificates if found to be competent and of

ceruncates it found to be competent and of good standing. For this purpose the said city inspector shall sit at least once a month. Sec. 3. That the said city inspector shall have an assistant examiner, whose duty shall also be to keep records of qualification and standing of each stationary engineer and fireman who holds a certificate of competency, and that each candidate shall be arguined. and that each candidate shall be examined by both the said city inspector and his assistant examiner, and both sign the certificate

if found to be competent.

Sec. 4. That the said city inspector shall ssue certificates of five different classes.

namely, as follows:

First class certificate shall be issued to any stationary engineer who has been continually n charge of the working of engines and boilers for a term of not less than ten years, and can pass a thorough examination in the practical management and care of stationary practical management and care of stationary steam engines and steam boilers; in the rudiments of the sciences involved in his profession, such as elements of mechanics; properties of water and steam in relation to heat; properties of different kinds of coal in relation to combustion and its economy; in the construction and properties of differ-nt kinds of stationary courses and believe. ent kinds of stationary engines and boilers; in the properties and uses of steam indicators and indicator diagrams, and in the principal causes and prevention of steam-boiler explosions. Any candidate who is found by examination to be worthy of a first-class certificate, shall be distinguished thereon as

chief engineer. Second-ciass certificate shall be issued to any stationary engineer who has been continually in charge of the working of stationary steam engines and steam boilers for a term of not less than five years, and can pass a thorough examination in the practical management and care of stationary steam engines and steam boilers, including the taking of and working out indicator diagrams, and in the principal causes of steam-boiler

Third-class certificate shall be issued to any stationary engineer who has been con-tinually in charge of the working and care of stationary steam engines and steam boilers for a term of not less than two vears, and can pass a thorough examination in the practical management and care of such engines and boilers, and in the principal

causes of steam boiler explosions.

Fourth-class certificate shall be issued to any applicant whom the examiners find com-petent to take charge of stationary engines and boilers of horse power not exceeding that which shall be stated on the certificate.

Fifth-class certificate shall be issued to any

ireman whom the examiners find competent to take charge of steam boilers used for heating purposes in manufacturing estabshments where no steam engine is used.

Sec. 5. For these certificates each pa

Sec. 5. For the e certificates each party receiving the same shall pay a fee, as follows: First-class certificate, \$5; second-class certificate, \$4; third-class certificate, \$3; fourth-class certificate, \$2; fifth-class certificate, \$1. tificate, \$1.

Sec. 6. All moneys collected as fees by

said city inspector for aforesaid certificates shall be paid over to the city treasurer, and the city comptroller shall audit the accounts

sec. 7. That during the first six months of year 1884, the time in which this ordinance shall be brought into full effect, those stationary engineers and firemen who are well known to the said city inspector, or to his assistant inspectors or examiners, to be competent and of good standing, may receive a third, fourth or fifth class certificate without examination, but after the expiration of said six months that is, on or after the first day of July, 1884—every applicant must be thoroughly examined as aforesaid before receiving a

certificate of competency.

Sec. 8. That on and after the first day of July, 1884, all stationary steam engines and steam boilers operated in the city of Phila-delphia shall be run and in charge of only such stationary engineers as shall be fur-nished with proper certificate of competency

as before provided.

Sec. 9. That when any engineer or fireman who has received a certificate is after-PHILADELPHIA.

The property of neer or fireman another certificate, but of a lower class to an engineer. Sec. 10. That the said city inspector shall

refuse to grant certificate of inspection to any party who shall maintain or keep in use or in operation any stationary steam engine or steam boiler within said city of Philadel-phia, which shall not be in charge of an engineer duly furnished with a certificate of competency as aforesaid. Sec. 11. That whenever the said city in-

spector shall learn of any stationary steam engine or stram boiler being operated within said city of Philadelphia, otherwise than by an engineer duly qualified and furnished with a certificate as aforesaid, he shall forthwith cancel and revoke his certificate of inspection

Sec. 12. That the certificate of inspection held by any steam user who shall attempt to operate a steam engine or steam boiler without the care of an engineer furnished with a proper certificate of competency shall be deemed and adjudged forfeited, and such steam user shall be subject to all the pains

and penalties provided by the act of Assembly of May 7, 1864.

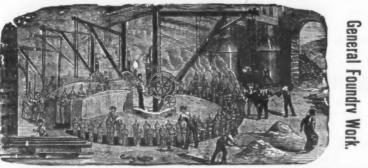
Sec. 13. That nothing in this ordinance shall be so construed as to render the city of Philadelphia responsible for any damage caused by steam-boiler explosion or other caused by steam-boiler explosion or other accident occurring from neglect or incom-petency of any engineer or fireman who may have passed his examination and received a certificate of competency from the proper

authorities.

Sec. 14. All ordinances or parts of ordi-Iron Sec. inconsistent herewith are hereby repealed.

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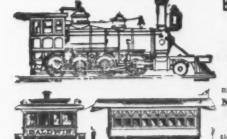
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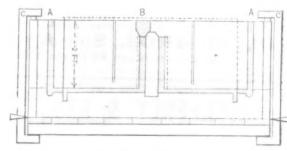


Foundry Hydraulies.

BY T. B. RADCLIFF.

In this article it is proposed to give four

hight of the gates being 24 inches. The pressure to lift the covering plate is equal to the weight of a piece of iron as shown by the dotted lines. The area of a circle being equal to the product of the square of the In this article it is proposed to give tour examples as they occur in practice of the pressure of iron, when in a liquid state, on pressure in this case,  $88^2 \times .7854 \times 24'' \times .26$  the surfaces of a mold. It is not always pounds = 37.952 pounds. In addition to the understood that it is the vertical hight and cross and bolts as generally used on a piece surface that make the pressure, and not



Foundry Hydraulics.-Fig. 1.-Square Casting, with Hub.

the diameter of the column. To illustrate this, running from the top and bottom plates put fill two barrels with water. Into the head of one screw a 1-inch gas-pipe 4 feet long, and into the head of the other a pipe 6 inches in diameter and 4 feet long. Now bore a 3-inch hole in the head of each barrel and attach a temporary valve; also place an equal weight on each valve—say, 5 pounds. It will be found that the water will have to be raised just as high in the 6-inch pipe

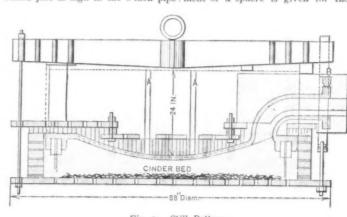


Fig. 2.-Still Bottom.

to lift the valve as it does in the I-inch | prefer to use it :

From three times the to lift the valve as it does in the 1-inch pipe, thus showing that it is the hight and surface that make the pressure, and not the diameter of the column. What applies in this case applies also to iron when in a liquid state. It is the hight of the gates above the surface that makes the lift.

The first example given is that of a casting 5 feet square and 1 inch thick, with a hub 8 inches in diameter and 18 inches deep cast in the cope, the sinking-head or riser being  $\frac{1}{2}$  for the sphere  $\frac{1}{2}$  inches in diameter and  $\frac{1}{2}$  inches will have to be subtracted from the average  $\frac{1}{2}$  inches the diameter to tue the diameter of the sphere subtract twice the diameter of the sphere subtract twice the diameter of the sphere subtract twice the diameter of the sphere subtract which is remainder by the square of the hight of the square of the

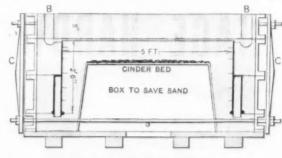


Fig. 3.—Gas-Works Purifying Box.

6 inches higher, making a head of 24 inches from the top of the gates to the joint of the flask, as is shown in Fig. 1. The pressure to lift the cope is equal to the weight of a piece of iron shown by the dotted lines, and is found by multiplying the area by the perpendicular hight, and this product by the number of pounds in a cubic foot of iron. We then have for this example  $5' \times 5' \times 2' \times 450$  pounds = 22,500 pounds. There is then a pressure of 11 tons 500 pounds to lift the cope on a casting 5 feet square with a

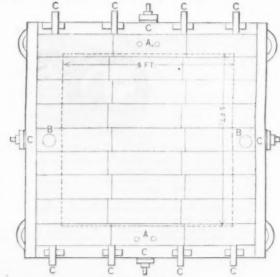


Fig. 4.-Top View of Mold in Fig. 3.

head of 24 inches, and the clamps or bolts of 5895 pounds pressure on one side, which, multiplied by 4, the number of sides, = 27,580 tain a weight of this size. The foot of the

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It in a weight of this size. The foot of the clamps should come under the battens of the bottom-board, and be drawn up reasonably tight by getting a purchase under the top foot of the clamp with a pinch bar, tapping the wedge up with a hammer. There should also be a wedge driven between the bottom-board and drag alongside of the clamp, so as to have a solid bearing from top to bottom.

The next example is a still bottom with an outlet cast on, as shown in Fig. 2, the casting being 88 inches in diameter and the average to the flask for a casting as given above. A piece of this bottom-board, and be drawn up reasonably tight by getting a purchase under the top top to bottom and below. In the above example 17 inches is one-half the hight, measuring from the top of the gates, and .26 pound is the weight of a custing as given above. A piece of this bottom-board, and be drawn up reasonably tight by getting a purchase under the top foot of the clamps should come under the battens of the clamps should come under the bottom-board, and be drawn up reasonably tight by getting a purchase under the top foot of the clamps should come under the battens of the lamps are clamps should come under the bottom-boat and below. In the above and below. In the bottom-board

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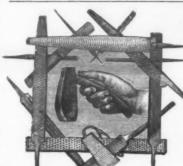
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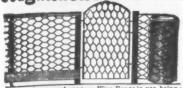
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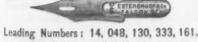
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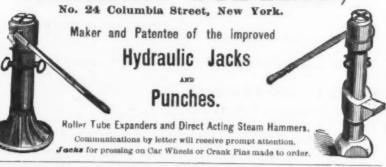
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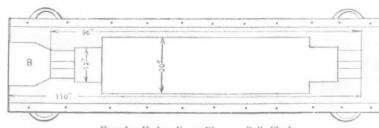
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flanges of the flask must be strong enough to described, is known as the radial-arm ma

the cope is equal to the weight of a piece of iron shown by dotted lines in Fig. 3, for which the same rule is used as in Fig. 1. The next example is a roll, the casting measuring of inches from end to end, 20 inches in diameter in the body and 12 inches in diameter at necks. As shown at Fig. 4, necks and wabblers being 18 inches long, we have first 20′  $\times$  3.1416  $\times$  60 = 3769′ of curved surface, which is to be considered as a plane for the body of the roll, and 12  $\times$  3.1416  $\times$  18°  $\times$  2 = 1357″ curved surface for the necks. Then 3769 + 1257 = 5126″, which, multiplied by 55″, one-half the hight, = 281,930  $\times$  .26 pounds = 73,301 pounds. There is consequently a pressure of 36 tons 1301 pounds on the sides, and the bolts and flanges of the flask must be strong enough to



Foundry Hydraulics,—Fig. 5.—Roll Flask.

sustain this weight, with a good margin for chine. It is somewhat simpler in its parts safety. It is understood in the above examples that the velocity, and consequently the momentum, of a moving body of iron have been reduced to a minimum. It should be stated that it is not my intention to go into the details of the flask or loam mold, but to give just enough of them to illustrate the subject. (In the engravings A represents the pouring gates, B the risers or sinking heads, and C the clamps.)

#### Routing Machine.

In the figure we show a straight-line routing machine, manufactured by John Royle & Sons, of 62 Railroad avenue, Paterson, N. J. This machine was exhibited at the fair of the American Institute, last fall, and it not only attracted marked attention upon the part of attracted marked attention upon the part of mechanical visitors generally, but was also awarded the medal of superiority. The pur-pose of the machine is to deepen with facility the depressed or white portions of woodcuts, electrotypes, stereotypes and the like. It is also used for making coarse wood engrav-ings and for the manufacture of blocks for printing fine paper hangings. The same principle is capable of extension in the form of machines to be used in stair building and other departments of carpentry and joinery. The deepening to which we have referred, and which is technically known as "routing," is done by means of a rapidly-revolving vertical cutter, which can be adjusted to the proper depth below the surface of the work, and which is capable of movement in all directions required in a horizontal plane. This machine has, in addition to the general requirements for such work, the special advander of perforations opening from said air tage of cutting straight and parallel lines into the front corner of the furnace.

#### New Inventions.

A bit for drilling square holes has been patented by E. H. Bieber, of New York City. The bit consists of a triangular rod, one end of which may be clamped to a chuck or brace. At the other end it has three radial cutting At the other end it has three radial cutting edges. Upon the plate to be drilled is placed a guide block having a square hole cut out equal to the hole to be drilled into the plate. The bit is then passed through this hole, and the cutting edges act on the plate. Each edge of the bit is made to revolve in a corner of the guide hole, while the other two edges slide along its sides. The bit will thereby receive an irregular accentric motion, and receive an irregular eccentric motion, and is guided in such a manner as to drill an approximately square hole. The claim of the patentee covers the combination of a threeangular bit with a guide plate having a

An invention designed to protect the jamb plates or plates on either side of the mouth of steam boilers, heating furnaces, &c., has been patented by T. O'Brien, of Boston, Mass. These plates, being on the interior of the furnace, are rapidly destroyed or warped and rendered unfit for use after a short time by the intense heat of the furnace. The inventor incloses each jamb plate by a guard or jacket of such size that an air-space or flue is left between jamb and guard. The guard is provided with a series of perfectations comping from said size. of perforations opening from said air-space



Straight-Line Routing Machine, Built by John Royle & Sons, Paterson, N. J.

formed in a much more expensive manner. The construction of the machine and the means by which its severatained are very clearly shown in the engage
ing. A very high rate of speed is obtained
upon a spindle which is made of hardened
cast steel with carefully ground bearings. It
may be safely run as high as 15,000 revolutions per minute. The rate at which it is
operated depends, of course, upon the character of the work being done. The machine
has the advantage of being very steady when
in motion. The cutter-bearing arm is supin monor friction rollers, and is controlled
the bolt is made in one piece with the
handle. The lower jaw is bent to reach
under the plate, through which the bolt is
passed, and is pivoted to the upper jaw.
When the tool is in place the handle is
raised, and thereby such a pressure is
brought to bear upon the bolt and plate that
the bolt cannot turn. The pivotal connechas the advantage of being very steady when in motion. The cutter-bearing arm is supported upon friction rollers, and is controlled by both hands. A light handle is properly arranged for each hand, the routing one of which is made extensible. The arrangement of this handle with a gutter above is such that it may be changed to the most convenient point at the will of the operator, without interfering with his position while without interfering with his position while routing or with the progress of the work. This enables the operator to rout very closely to the lines and into the most delicate spaces with ease, confidence, precision and rapidity. By changing the gutters metal or wood is routed equally well. The machine is designed for routing zinc, stereotype plates, either blocked or unblocked, letter blocks, wood engravings and show-bill cuts. The

Accordingly, it is found useful in various the guard affords protection to the jambs processes of finishing and decorating work, as lines can be cut with facility and accuracy by it which otherwise could only be perwhich accumulates in the forward corners of

ferent widths of timber.

A compound metal-working machine claimed to have great force, and intended to give eccentric power to punches, shears, presses and the like, is composed of two segmental toothed jaws, both eccentric and INFRINGEMENT OF JOHN WILSON'S TRADE MARK, MASSACHUSETTS, U.S.A.

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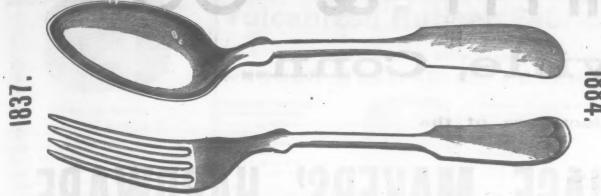
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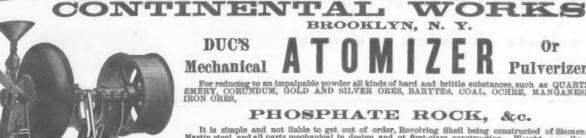
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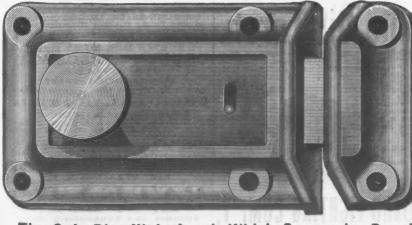
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so that when safd lever is worked both jaws turn eccentrically on their pivots and give motion to the tool-holder. Thus the levers add their force to that of the eccentric in the forward movement, and in the reverse movement they pull back to the holder and tool. This machine has been patented by N. J. Rice, of Vernon, Pa.

A patent steel-tired elastic wrought-iron railway wheel has been used largely in Canada, and it is claimed that these wheels, although high in first cost, possess superior merits to the cast-iron chilled railway wheels in general use. These latter are cheaper, but are inferior in wearing power. Mr. Herbert Wallis, mechanical superintendent of the Grand Trunk Line, reports that the average mileage of 828 wheels from the first turning has been 73,566 miles, and these are still running. The highest mileage obtained from the first turning has been 228,643 miles, and the highest total for any wheels now in the service is 474,311 miles

G. H. Webb, of Pawtucket, R. I., has constructed a new blast furnace for heating bolt blanks. In these furnaces one side of the fire-box is left open, and the blanks are piled up against such open side, so that their heads are brought into direct contact with the mass of burning coal. This causes the blast in the furnaces, as usually constructed, to drive out the heat and flames, and thus the workman is prevented from conveniently removing the heated blanks. The inventor proposes to intercept and divert the hot-air currents by a strong vertical blast of cold air. The cold blast passes from an air chamber upward and into a wind-box projecting in front of the firebox toward the workman. The wind-box is placed on about a level with the grate, and has upwardly opening slots. Through these the cold blast escapes with force sufficient to cut off the horizontal hot-air curtheir heads are brought into direct contact ficient to cut off the horizontal hot-air cur-rent issuing between the pile of blanks from the fire-box. Thus a body of cold air is formed in front of the furnace, shielding the workman from the intense heat, while permitting close handling of the heated blanks.

A new rumble for scouring castings, washing ore, &c., consists of a cylinder journaled on the upper edge of a tank partly filled with water. The cylinder has buckets or chamwater. The cylinder has buckets or chambers formed around it, arranged to scoop up the water into which they dip, raising a portion of the same and conducting it toward the axis, where it is discharged into the cylinder. The castings, sweepings or ashes containing metal dust or scraps are placed into the cylinder through a door or feed-sport the cylinder through a door or feed-spout, and the tank is filled with water. Motion being imparted to the cylinder, it revolves with its lower portion containing the cast-ings immersed in the water. During the ro-tation the buckets raise the water at one end, and thus cause a circulation or current which will draw off the lighter waste matter. Thus the sand, scale and other dirt is readily removed from the castings, the water carrying off the waste through ports or outlet openings. The castings, when sufficiently scoured, are removed by means of the same door through which they were introduced. The apparatus has been patented by E. W. Vanduzen, of Newport, Ky.

A simple device for swaging removable saw teeth when worn has been patented by S. J. Chalfant, of Albion, Col. These teeth, s. J. Charrant, of Albion, Col. These teeth, which are now generally thrown away when dull, may be made almost as good as new several times before they become worthless. The teeth are held in a die block, which has a curved face conforming to the shape of the back of the saw tooth. A clamping lever die may be pressed down upon the upper side of the teeth by a cam lever nivited in a side of the teeth by a cam lever pivoted in a slot of the die block. The dies are so applied that they may be taken out and others adapted to teeth of different form put in. The entire machine is held in the jaws of a vise, so that it will sustain the blows of a

A reversible sad-iron for ironing flutings and trimmings has been patented by J. A. Yarger, of New Hampton, Iowa. This iron has on each side a flat and a convex polishing has on each side a flat and a convex polishing surface, and it therefore becomes necessary to adjust the handle anew for each polishing surface when used. This is accomplished by means of a squared journal entering a corresponding central socket of the iron and connected by an arm and spring-catch to the handle. When the position of the iron is to be changed so as to use a flat instead of a convex polishing surface, the squared journal is unlocked from the handle, withdrawn from its socket, and reinserted at a different angle, wherupon it is again locked by the spring-catch. Thus the handle may be locked rigidly in any position. The iron is provided with an interior wick tube con-

a double lever connected to the second jaw, nected to an oil reservoir. This reservoir is

An instrument intended to accurately measure the thickness of sheets of metal, paper, &c., has been invented by E. Morrison and J. P. Herron, of Washington, D. C. This gauge is composed essentially of two jaws, between which the material to be gauged is introduced. One of these jaws is stationary, while the other jaw are movable. The latter is made in the form of a lever, which, when the jaws are opened, swings on its fulcrum. The other end of this lever is curved, and engages a similar curve formed on the end of a pivoted index finger. As the jaw is moved the index finger moves with it along a scale, and indicates on it the thick-ness of the material between the jaws. Of course, the amount of motion of the jaw is greatly multiplied by the index finger.

An improvement in steam-heating apparatus, patented by J. H. Blessing, of Albany, N. Y., is designed to readily clear of condensed water a heating coil or radiator which is placed below the water level of the boler, without the necessity of using automatic return steam traps. In the return-pipe of the radiator is placed a receiver above the water level of the boiler. This receiver is connected with the return-pipe of the boiler. A "pass-by" connects supply and return pipes of the radiator, and all the pipes are provided with check-valves. When the radiator is to be emptied of accumulated water the valve in the boiler return-pipe is opened, owing to condensation, a vacuum will be formed in the receiver, into which the water from the radiator will flow.

#### A New Clamp.

Messrs. E. C. Stearns & Co., Syracuse, N. Y., have recently brought out a new iron clamp, the general appearance of which is shown in the engraving herewith.



New Iron Clamp.

clamp has the special merits of good design great strength, proper distribution of metal and convenient shape for use to recommend it to favorable attention. It is well made, of good material, and is likely to give satis faction to all who employ it.

## Competitive Tests for Locomotive

A thoroughly good plan for promoting the efficiency of the locomotive department has been adopted by some of our railroads, in C. Reusch, of New York City, is the patentee of a new process of making enameled sheet metal ware. As usually made the body of the vessel is first coated on the interior with enamel, after which the exterior is coated by an electro-deposition of copper or other suitable material. As this coating is very thin it is liable to wear off and expose the iron body. The inventor unites by rolling a sheet of iron with a sheet of copper; then stamps the united sheets into the required hollow form, and finally lines the interior surface with glaze or enamel. In this way the vessel has a thick and substantial copper coating, which considerably increases its value and durability. which is to be used in case the device is to be suspended from a projection. The hook has a small cutting edge which works against a similar cutting edge of the bar. When the fuse is to be cut it is placed on the bar, and the hook swings down. This convenient little tool has been patented by J. Ryan, of Salt Lake City, Utah.

To do this in the engine amiliar. To do this in the engine at the engine at the same time enough of the road and of the actual hard work of driving to do full justice to the men. There are men who need just this sort of sharp watch-fulness to bring out at their full yalue the excellent qualities they possess. There are other men who, when left to themselves, as drivers generally are when out on the road, make no pretense of skillful work, and are bard to be reached by any known means except such as this one referred to. If they are shown once in a while that with the same time enough of the road and of the actual hard work of driving to do full justice to the men. There are then the none who, when left to themselves, as drivers generally are when out on the road, make no pretense of skillful work, and are shown once in a while that with the same time enough of the road and of the actual hard work of driving to do full justice to the men. There are the men who, when left to themselves, as drivers generally are when out on t

There are some obvious hindrances to the full adoption of such a plan by railroads, but the idea is a good one and worthy of careful consideration on the part of those whose fuel bills are burdensome and out of proportion to those incurred upon roads near by in comparison with the work

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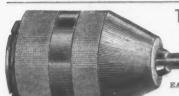
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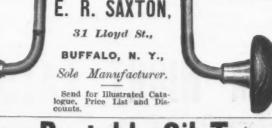
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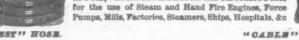
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This Packing is made in lengths of about 20 feet, and of all sizes from 1/4 to 2 inches square.

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#### Death of John M. Phillips.

John M. Phillips, proprietor of the Hewes & Phillips Iron Works, in Newark, N. J., died of heart disease in his residence at Wooddied of heart disease in his residence at Woodside, a part of Newark, on the 15th inst. He was 67 years old, and was a tall man of athletic build and strictly temperate habits. He arose in apparent good health. His wife quitted the room while he was reading a book. Ten minutes later she returned and found him dead on the floor. He leaves a rife of some and three deapthers. wife, six sons and three daughters. Four of the sons were associated with him in busi-

John M. Phillips was the great-great-grandson of the Colonel Phillips who com-manded the crack corps of Cromwell's army. Colonel Phillips and Dr. Morris, a regimental surgeon, took such an active part in bringing the head of Charles I to the block that the head of Charles I to the block that when, in 1660, Charles II came to the throne, they were forced to flee to America. Dr. Morris settled at Litchfield, Conn., and Colonel Phillips at Killingsworth, now Clinton, in the same State. In 1666 Dr. Morris became one of the first purchasers of Newark, N. J., where he was the first captain of militia and first sheriff of Essex Country. His old friend, Colonel Phillips. County. His old friend, Colonel Phillips, soon purchased 900 acres of land at Caldwell, in Essex County, N. J. One of his grandsons, David Phillips, settled in Newark, grandsons, David Phillips, settled in Newark, where he married Sarah Morris, a grand-daughter of Dr. Morris. He began house-keeping in a little one-story frame building, Io x 16, which is yet standing. David Phillips ran a vessel between Newark and New York, and in 1696 the Proprietors of New Jersey deeded to him 16 acres of ground, which his grandson, who died in Newark on Friday, has left to his children. John M. Phillips's father had quarries at Belleville and Newark, and he supplied the stone for building Castle William, Fort Lafayette, St. John's Church and other buildings in New York. John M. Phillips quitted the little house in Newark 51 years ago. He was 16 years old, and only had 20 cents in his pocket, but he had a desire to make his way in the world. He learned the trade of pattern-making in Newark. Then he went to the West Point foundry, and thence to the Novelty Iron Works, New York. In 1845 he and the late Joseph L. Hewes began business at No. 60
Vesey street. A year later they removed
to Newark, and in 1853 began making boilers,
steam engines and machinists' tools. During the war they employed 500 men. They altered thousands of stands of arms from flint-lock to breech or percussion guns for New Jersey and the General Government. In 21 days they turned the turret rings and

In 21 days they turned the turret rings and made a planing machine fcr planing the turrets of the Monitor. After Mr. Hewes died Mr. Phillips purchased his interest and became sole owner of the extensive works.

Although Mr. Phillips lived in one of the handsomest houses in Newark, he has religiously preserved the little house in which he was born and in which his father and grandfather died. His estate in Newark is so extensive that it makes 1½ miles of street front in the loveliest part of the city. Mr. Phillips was a great reader, had a most remarkable memory, a wonderful power of description, and his knowledge had a wide and varied range. He never accepted office, but he was prominent in financial institutions, church work and charities.

#### Termination of Two Important Suits.

A suit resulting from a purchase of old rails was recently decided in Philadelphia against the Philadelphia and Reading Coal and Iron Company. On January 23, 1880, Clark, Post & Martin, of New York, made a contract with the company to deliver 5000 tons old iron "T" rails at \$43.60 per ton if delivered in Philadelphia, and \$1 less if delivered in New York. Shipments were to be made from foreign ports in the months of February, March, April, May and June of about 1000 tons per month, and payments were to be made in cash on the presentation of invoices and United States Weighmaster's return. Soon after this contract was made the company became very hard up for rails, and, in response to its urgent demand, a shipment was made of part of the rails in advance of the stipulated time. The company went into the hands of receivers on May 21, 1880, and default was made in payment for the rails shipped under the agreement. The receivers refused to take any more rails under the contract, and made a rather vague claim of on a non-fulfillment of its terms on the part of Clark, Post & Martin. The shipments continued until June. The rails remained on the hands of that firm until February, 1881, when they were sold to the receivers of the when they were sold to the receivers of the Coal and Iron Company at a loss of \$70,000 to the firm. For this sum they brought suit in Common Pleas No. 4. On the trial of the case Judge Elcock charged that if certain of the rails were shipped in months earlier than those specified in the agreement, but in re-sponse to earnest requests for haste on the apone to earnest requests for naste on the part of the company, the company were not now at liberty to object to the date of such shipments. The jury found a verdict of \$70,027.20 in favor of the plaintiffs.

Another suit decided in Philadelphia on

Another suit decides in the 12th inst. was the long-pending Huganof the Sulzbach Bros., bankers, of Frankfort-on-the-Main, against the trustees of the Davenport and St. Paul Railroad Company, involving a claim of \$800,000. The court decides in favor of the entire claim, and orders that the estate of J. Edgar Thomson pay the entire damages The complaint as filed against Andrew Carnegie, of New York, is dismissed. The Sulzbach Bros. brought the action in the form of an equity suit, as bondation in the form of a equity suit, as bondation in the fo of the mortgage that they accompanied. The late Mr. Thomson and ex-Governor Dennison late Mr. Thomson and ex-Governor Dennison were trustees under the mortgage. The other defendants are alleged to have participated in the overissue of bonds. The overissue of bonds, it was contended, was the result of the negligence of Mr. Thomson as trustee for the bondholders. The court finds the overissue to be for the whole amount claimed by the complainants—namely, \$1,000,000. The Sulzbachs purchased these bonds at 80 per cent. of their

face value; consequently, they make a claim of \$800,000 as the amount of damage they have suffered. The court, however, was of the opinion that the measure of damages was not to be calculated upon the percentage paid by the complainants for the bonds, but upon calculation as to what the bonds would have been worth and would have realized had the road been completed to an extent justifying the issue of the bonds and then been sold upon the failure of the construction company.

#### New Hardware Articles.

Piper's improved gentlemen's "Gem" carriage wrench, which is manufactured by Alcott & Smith, New Britain, Conn., and is now first offered to the trade, is shown in Fig. It is intended for buggy and carriage use.
 This wrench is secured to the inside of the hub band by adjusting it so as to allow the two band by adjusting it so as to allow the two half-round cheeks of the frame and the stud of the slide to enter; the wrench is then pressed in as far as the parts will allow, and fastened with the thumb-screw. When thus fastened the nut can be unscrewed from the axle and screwed up by the wheel without



Fig. 1.

removing the nut from the hub. The advantages which such an arrangement possesses, as the operator's hands are not soiled by grease, nor is the nut liable to be dropped on the ground, will be readily appreciated.

Fig. 2 represents a new wagon and carriage jack which is made by the same parties under Arnold's patent. This jack is deties under Arnold's parent. This jack is described as one that can be adjusted and operated instantly with one hand, since there are no springs or pins about it. It is made



100

entirely of metal-malleable or wrought iron, as most suitable—and is recommended as being symmetrical and durable.

being symmetrical and durable.

The same circular describes Alcott's "Perfect" coat and hat hook, an article which has recently been put on the market, and is represented in Fig. 3. While there are many styles of hat hooks in the market, the superiority alcounter this is the feat that riority claimed for this is in the fact that from its form it holds any style of hat securely, so that it is not liable to be removed accidentally. This is accomplished by the



package in shipment. This hook was designed especially for the use of hat-rack

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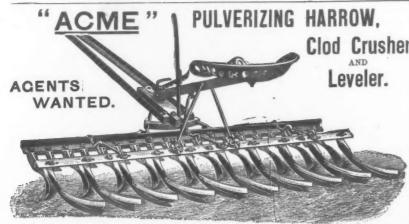
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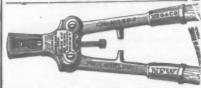
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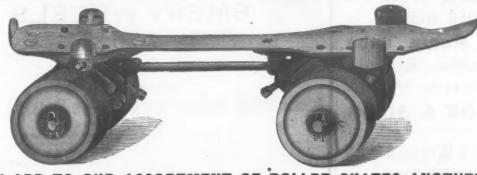
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MANUFACTURERS OF

# COACH & CARRIAGE HARDWARE

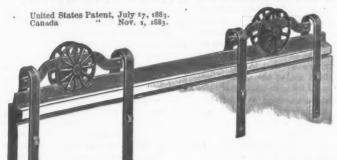
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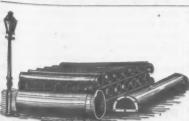
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Iron Ore Mining in Eastern Pennsylvania.

All along the Eastern Pennsylvania Rail-road from Reading to Allentown, says a cor-respondent of the Philadelphia *Press*, there are a large number of iron-ore mines which flourish as the iron business is brisk or dull. The ore taken out is the ordinary hematite, which is brought in wagons to the ore stations along the railroad, loaded on cars and shipped to the various blast furnaces in Eastern Pennsylvania. The ore does not lie deep under the surface, and the various veins or pockets are worked by parties who lease the mines from the farmers who own them. The operators pay the farmers certain royalties per ton, frequently guaranteeing the mining of a certain number of tons of ore permonth. In many instances the operators let the mining of the ore out by contract to their men, while others pay their hands so much per day. When the iron business was booming, some time ago, ore on the cars was worth as high as \$6 per ton, and laborers were paid as high as \$6 per ton, and laborers were paid as high as \$1.50 per day of 10 hours. Now, however, the iron trade is very dull; ore is as low as \$2.75 per ton, as business is slack. Laborers at the mines are paid as low as 60 cents a day for 10 hours' work. Some get 75 cents, and others 80 and 90 cents, but the average is about 75 cents. The operators say that unless they can get labor that cheap they can't mine ore profitably, and rather than lose money they will shut down. In than lose money they will shut down. In many instances the laborers were told this, and it was left to them whether or not work should be continued. The poor miners decided to work for the merest pittance in order to keep the wolf from the door, and thus it is that they are working for such wages. The operators are fully aware that the wages are shamefully meager, but claim they cannot help it, owing to the general condition of the iron market.

Mr. James F. Dumm is one of the leading and best-posted iron operators in this sec-tion. He was asked what he knew on the tion. He was asked what he knew on the wages question and the iron-ore outlook generally. His reply was: "I am paying 90 cents a day to my miners. They work 160 feet under ground and are expert men, who labor with the pick. I will not pay less for labor, although poor men have come to me who were idle and asked me for a job, agreeing to work for 50 cents a day. They are honest and want to do something."

"How do you account for such low

"It is certainly not the fault of the iron perators. We tell the men truthfully that we can't afford to pay any more, and I sup-pose other operators do the same thing. If the miners can't afford to work for such wages the mines must be shut down. Of wages the inner must be shut down. Or course, in some sections operators can't afford to pay more than 60 cents per day, particularly where the royalties are high and the mines located a great distance from the railroads. The miners, in many instances, have large families to support, and, rather than be idle, they agree to work for whatever the bosses can pay. Some work under contract and others at so much per day."

What is iron ore worth now ?" "What is iron ore worth now?"
"For ore on the cars we get from \$2.25 to
\$2.75, according to quality. A good deal of
ore is sold for less than \$2.25. Now, there is
very little, if any, profit to us on ore at those
figures. The absolute first cost of getting
out a ton of ore from the clay beds and
washing it ready for market is from \$1 to
\$1.50. We then have to pay to the owner of
the mine a royalty of from 35 cents to 50 cents
a ton; the ore must then be carted to the
nearest railroad station or ore wharf, costing
from 35 cents to 50 cents a ton; timbering a from 35 cents to 50 cents a ton; timbering a mine costs at the rate of at least 30 cents a ton, making \$2 for the lowest and \$2.80 for the highest per ton. The wear and tear of machinery at the washeries, incidental expenses, &c., go very far to increase the first cost of ore, so that by the time we get it loaded on the cars, what we get for it is a trifle, if anything, over the first cost. That is the reason men are paid as low as 60 cents

Edward Sheetz, of Reading, a gentleman who is extensively known in the iron trade, was next seen. He said: "When I first saw it published that ore miners were paid as low as 60 and 65 cents a day, I made up my mind to come out here among the miners and see for myself. I have found that there has been nothing overstated or overdrawn. Men are paid from 60 cents to 80 cents a day, but I don't care to say much how they live. I found a good many men, single, huddled to-gether and living in shanties by themselves. They buy bread and potatoes at the railroad stations, and do their own cooking. They exist—nothing more; but their battle to keep

was asked to give an account how ore miners live on 60 cents a day in the open country districts. He said: "I have had condistricts. He said: "I have had considerable experience among men who live outside of the villages; miners who have families and who have worked for years on the Flats. They have seen good times and bad times. They have been paid \$1.50 a day, and all the way down to 60 cents, what they are getting now. Of course, they saved nothing at \$1.50 per day, because they had large families, and how they get along now at 62 cents a day is a mystery. Some have as high as eight children, but they average, say, four. They live in a rented house that as high as eight children, but they average, say, four. They live in a rented house that may have cost a farmer \$300 to build. You can put up a rough one-story frame with a garret for that money, not counting the value of the ground on which it is built. The incouraging. New industries are everyvalue of the ground on which it is built. The inside of the house will be well floored and plastered smooth, but it won't be whitecoated. It will have two rooms down stairs—a sort of front room or sitting-room and a kitchen. As to the sitting-room and a kitchen. As to the sitting-room, probably one in 50 will be laid with rag carpet, and the kitchen floor will be bare. Mind, I am now trying to give you best picture I can. In the kitchen the cooking is done, and all meals eaten, excepting on special days, when the meal is spread in the front sitting-room. The garret may be divided into two parts, one for the children and the other for the parents, but very frequently all sleep together on the ame floor. Now, as to the cost of their liv-

An ore miner who gets but 62 cents a day, works from 10 to 12 hours per day, on such days as the weather is pleasant and work is to be had. Hundreds pleasant and work is to be had. Hundreds of the men work in the open air, because their labor is surface mining. When it rains they cannot work. If he works 20 days a month he is doing well, especially in the winter season. This will bring him in an income of \$12.40 a month.

The farmer will get \$3 per month rent. The miner then has \$9.40 for his month's work left. On this he must manage to subsist and also support a family of his wife and tour or five children. For food alone his expenses for himself and family will not be as cents a day actual outlay. He has raised his meat, potatoes, vegetables, saurkraut, &c., and his flour and store goods don't amount to more than 18 cents a day for the amount to more than is cents a day for the entire family. He has now about 12 cents per day left for clothing, shoes, taxes, coal, tobacco and incidentals, or, in other words, \$3.72 per month for that purpose. A miner will need a pair of brogans, costing \$1.25, every three months, together with overalls, &c. Deducting this, there will, on an average he agreement in a month which the age, be 32 remaining a month, which the careful housewife takes charge of to clothe herself and children, buy coal, pay the old man's taxes and see that his box of shorts never gets empty. How she does it is a mystery which she only can explain.

"The ore miner rarely has a Sunday suit, but it is quita the exception to find his wife.

but it is quite the exception to find his wife or his children meanly dressed on the Lord's Day. If she is a good woman, herself and little ones will be clean and neatly dressed to go to Sunday-school when the weather is warm, and during four months in the win-ter two of the children at least will have boots or shoes and clothing warm enough to go to the cross-roads winter school.

"His family knows nothing of luxuries

"His family knows nothing of luxuries and very little of books or newspapers. As for new bedding, furniture, home decorations or anything of that sort, they are entirely out of the question. Occasionally they have butter, fresh beef and eggs. During the winter the miner frequently traps rabbits on the hills with snares, or, if he is lucky enough to own a gun, and has money to buy powder and shot, he will be able to hunt enough game on Sunday to furnish himself powder and shot, he will be able to hunt enough game on Sunday to furnish himself and family with fresh meat for several days. Now, that is about how a poor and respectable miner gets along, who has lived in the country and is settled down. There are plenty of single men, foreigners, such as Hungarians and Polanders, who live on boiled potatoes and molasses bread, and who do their own cooking in shanties; sleep in the clothes they wear during the day, and cover themselves with straw in the loft. Such a way of living is the worst I ever heard of, yet these foreigners save money. It costs them about 30 cents a day—hardly that. They are not naturalized, pay no taxes, that. They are not naturalized, pay no taxes, buy very little clothing, eat coarse fare and drink black rye coffee. They send home \$15 buy very little clothing, eat coarse fare and drink black rye coffee. They send home \$15 every three months, the postmaster doing all their business for them. They have great confidence in the postmasters. In this way a Pole, by five years of toil and hardship, can send enough money home to enable him to go back home himself and live well on his interest."

The Union Pacific and Steel Rails .-President Sidney Dillon, of the Union Pacific Railway Company, says a Pittsburgh paper, was in the city a few days ago. The project which brought him is a big one. He was quietly investigating the subject of Bessemer steel rails, both the cost aboard cars and the cost of manufacture. His plans contamplate cost of manufacture. His plans contemplate the erection of a Bessemer plant larger than the Edgar Thomson for the exclusive manufacture of steel for steel rails, structural purposes and for engine and car building. The poses and for engine and car building. The result of the investigation was the deferring at present of the active prosecution of the work. Mr. Dillon was interviewed on the subject. He said that the present state of the market made it possible to buy rails as cheaply as they could be made anywhere, but that his company did not expect present prices to rule long, and they could at least save the hauling by making their own rails. "Our road," said Mr. Dillon, "will use our entire product. We will make our own rails, our own bridge and culvert steel, and pretty soon we will make our own cars and locomosoon we will make our own cars and locomo-tives." The orders for machinery, furnaces, &c., will be placed in this city shortly.

tive power to long distances by electricity, M. Le Blanc suggests that rivers should be regulated by the construction of reservoirs capable of storing immense quantities of water in time of flood, so that it may be water in time of flood, so that it may be exist—nothing more; but their battle to keep body and soul together on 60 cents a day must be imagined; I don't care to describe it. It's a fact, though; no mistake about it."

A sub-boss who has worked on the Texas Flats, at Lower Macungie and other points, was asked to give an account how ore miners. 500,000,000 c. m. of water per annum, of which 190,000,000 run to the sea, the rest evaporating. Striking an average, he finds that such

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# The Iron Age

Metallurgical Review.

New York, Thursday, February 21, 1884.]

DAVID WILLIAMS, JAMES C. BAYLES JOHN S. KING,

Publisher and Proprietor

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#### Concerted Restriction of Production.

Europeans are accustomed to criticise American manufacturers for their dis-position to act in concert. Con.binations of all sorts are quite common on this side of the Atlantic, and there are very few branches of manufacturing industry in which at some time or other an organization to control prices or to regulate production has not had an active and potential existence. In some staple lines, of course, such as pig and bar iron, it has not been practicable to form a combination, and prices and production have varied according to the fuctuations in the demand. It cannot be charged that organized action among iron and steel manufacturers has often been undertaken for the purpose of securing unreasonable profits. The usual motive for concert of action is to prevent prices from declining to actual cost or below it. Possibly this may sometimes result in the maintenance of prices in a particular branch of trade at a point which makes its remunerative condition very conspicuous, as compared with other branches in which competipanies these extraordinary freaks of nature spring trade, and, later on, on the prospect of pared with other branches in which competition is whol'y unrestrained and prices leave no margin above cost. A combination which great relief to know that the worst is past outlook for tin plates, considering all circumstances in which competition is whol'y unrestrained and prices leave and adds the tragic to the sublime. It is a the fruit and cereal crops, &c. The general some affirming that this class are a source of loss rather than profit, which the swifter severely criticized by British manufacturers. Recent events in England show, however, that there is a decided inclination to adopt such a policy in several branches of the iron and steel trades, which are now and have for some time been suffering from very great depression. Curiously enough, the leaders in the movement are the pig-iron and steel-rail manufacturers. About three years ago the North of Eng-

land and the Scotch furnacemen jointly agreed to restrict their production 12½ per cent. for a specified time. The compact was kept and prices were held reasonably Since the expiration of the time covered by the agreement production has not been limited in any way and prices have ruled unusually low, the average price of Scotch warrants last year having been lower than for any year of which we have knowledge, our reports going back to 1863. In the North of England the manufacturers declare they are selling pig iron at or below esst. It is surprising that failures have no: been numerous in that great iron-making district, but there are grave apprehensions of trouble if the situation is not speedily cured. As the prospect is not bright for an

the first of March, and to keep them out for a year, which is equivalent to 15 per cent. reduction in the total output. No arrangement has been effected with the Scotch pigiron makers, but they are restricting their production independently and irregularly. Messrs. Wm. Baird & Co. have alone blown out 10 furnaces already. This action has caused the price of Scotch and Cleveland pig iron to advance moderately. Time will show whether the production has been sufficiently restricted to secure permanent im-provement in prices, but the restrictive policy has been fairly inaugurated, much to the dissatisfaction of some manufacturers' who would prefer to let matters take their course without let or hindrance.

In the British steel-rail trade it is understood that the manufacturers have determined to restrict production at least 20 per cent. Full particulars of this agreement have not yet been made public, but there is reason to believe that the German and Belgian steel-rail manufacturers have been induced to co-operate with the English. Some color to these reports is given by the recent advance in British steel-rail quotations. These are now £4. 15/ @ £5, as against £4 @ £4. 10/ two weeks ago. It is not believed that the demand has increased sufficiently to warrant this advance, which has presumably been brought about by the action of the makers with regard to restriction of production.

The tendency to curtail the excessive outamong the German iron manufacturers. It rise in many States. is stated that the Silesian iron manufacturers have agreed to reduce their production 10 per cent.-and eventually, if considered necessary, 20 per cent .- on condition that the other groups of German iron manufacturers do the same. The less important groups in Saxony and Bavaria have adopted a similar resolution, but the adhesion of the Rhenish-Westphalian and Saar-Moselle producers has yet to be announced. The principal German coal owners are also making an effort to secure concert of action in reducing the output of coal.

#### The Ohio Valley Floods.

The disastrous overflow by the Ohio River a year ago was a calamity which nobody expected to see repeated inside of at least a quarter of a century. The water then rose such an extraordinary hight at Cincinnati that the flood seemed to have the nature of a phenomenon, brought about by a concurrence of causes which could be expected to happen very rarely. Such a presumption seemed the more reasonable when it was ascertained that the flood of 1883 had not been approached in magnitude since 1832, more than 50 years before. The citizens of the Ohio valley could, under such circumstances, be totally relieved of the charge of heedlessness in reoccupying the territory which was so terribly water-swept last year. They could not be expected to foresee a repetition of the calamity inside of a twelve month, when so many years had passed without danger. Yet it came, and for the past two weeks the people of the Ohio valley have been suffering from a visitation of waters which surpasses anything ever before experienced in that section. From the head waters of the Ohio in Western Pennsylvania almost to the point at which that river is lost in the mighty volume of the Mississippi, towns and cities have been laid waste prosperous villages have been swept out of existence, ancient landmarks have been obliterated, and a thrifty farming population have been reduced to barest want.

The loss of property throughout this vast stretch of territory has been immense, aggregating many millions of dollars. These losses are absolute. They are not like those inflicted by fire, much of which may be made good by insurance companies. That which the floods have destroyed is without any such hope of relief. But above and beyond the that they have about touched bottom, the wasted fields, the ruined homes, the wrecked workshops and the stricken towns, is the cheapness is calculated to stimulate their loss of human life which inevitably accomuse. Much will, of course, depend upon the Tidings from many places report "the river is within its banks." But the effects of the flood do not disappear as rapidly as the waters For days we will hear of the ruin that has been wrought to furnace and factory and mill, to farm and village and city, and we will also hear of the distressful state into which many industrious citizens and their families have been suddenly plunged. The cry for assistance is not, however, unheeded, but the Government and the people are contributing liberally to the aid of the Ohio Valley sufferers, and food and clothing are being sent to them in abundance.

to be done in repairing the damage wrought by the water, and labor will evidently be in great demand. Those who are now idle perforce and dependent upon charity will not be obliged to continue long in that condition. The news from Pittsburgh is to the effect that the iron, steel and glass works there are generally resuming operations this week, we print an account of the proceedings on having already "cleaned up." Wheeling this occasion, furnished by our Washington suffered greatly, the whole city having been correspondent. The committee express their under water, but we are prepared to hear soon that her citizens have, with their ac-

down on the Ohio progress in the resumption mittee, and to answer the following ques-

it will not be prudent simply to repair the damages caused by this flood and to trust to nature again. At Cincinnati, even while the water was at its highest, a meeting of the Chamber of Commerce was called, and a committee was appointed to consider the most feasible method for raising the "bottoms "above high-water mark, Other towns and cities are considering the same question, and various measures for avoiding disastrous consequences from future floods are being discussed. Immense levees are proposed such as those on the lower Mississippi, while some advocate the construction of huge reservoirs in the mountains to contain and hold in reserve for dry seasons the winter and spring rainfall which causes these floods. In the midst of the uncertainty as to the best means of directly and immediately preventing another deluge, one point seems to be pretty thoroughly agreed upon, and that is that the forests about the head waters of the rivers which empty into the Ohio should be restored. This is a remedy which will have to be taken in hand by the nation itself, if it put of iron and steel is also manifesting itself is to be adopted, as the affluents of the Ohio

#### The Position of Tin Plates.

coke tin at \$4.90 per box, and remained steady for about three weeks, when a question, is due rather to fiscal causespoint of view tin plates do not appear to be increase, keeping pace with the ordinary increase of consumption abroad. It was 277,-300 tons in 1883, against 265,021 in 1882, aud 243,381 in 1881. The net importation into the United States during the first II months of 1883 was 206,459 tons, against 197,326 in 1882; into New York alone the import in the whole of 1883 was 2,193,978 boxes, against 2,265,033 in 1882, thus varying but little, and present stocks in port and in the interior nowhere show greater accumulation than usual at this time of the year. Consumption must, therefore, have been steady; judging from the exports of tinware and canned goods, as shown in the table given below, home consumption must, indeed, have varied very little:

Someone Exports of Tinware and Car	nned Goods	
During the First Eleven Mont.	ha.	1
1000	1860	ı
Blacking	\$177,407	1
	549,088	1
Fin toys	784,016	1
reserved fish	1,218,395	1 8
	620,266	1 6
Jones 236,207	485,550	14
Ioney	47,710	1
ard oil	349,188	1.
etroleum	83,819,530	l b
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aints	486,417	8
ard	24,714,577	n
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arnish	169,094	A
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..\$72,712,991 \$70,969,208 The above table includes a portion of some articles not canned, but enables us to form a general idea of the movement in this branch

The statistical position of tin plates being onsidered sound on this side, and the anticipated reduction of the duty discounted by the decline since January 19, it is believed more so as they are really cheap, and this stances known at this writing, has in it class are expected to recoup. At the same much to encourage the conviction that they time, the fact cannot have escaped attention are tolerably safe as at present situated. In that the elegant "seven-day" steamers are Wales the bulk of larger makers have the first to lay up. The truth appears to be booked orders for a couple of months ahead, that it is impossible for all the ocean tonnage so that prices are kept down in that locality mainly by the financial necessities of small in the most prosperous times. The building makers and the dull accounts from here, and not by an excessive output seeking purchasers. It is worthy of remark that the consumption of tin plates, whatever the times, has at no period that we know of been seriously checked in this country for 10 years past.

As soon as the river again resumes its natural channel there will be plenty of work House of Representatives are engaged in the consideration of the Morrison tariff bill, and hearings have been granted to several of the industrial interests affected by tariff legisla- and April cannot be made except at materition. On Saturday, representatives of the ally higher figures. Importers of Scotch pig metal trades appeared before the committee and their statements and arguments occupied the entire day. In another part of this issue room to this port has been restricted within willingness to receive and consider other in

down on the Ohio progress in the resumption of work will be slower, because the flood has been longer in reaching its hight and later in receding, but days will not run into many Cost of ocean transportation? Price of the domestic article? Cost of production? Wages on the part of the Grand Frunk. receding, but days will not run into many weeks until from Portsmouth, Ironton, Cindomestic article? Cost of production? Wages on the part of the Grand Trunk, which owe weeks until from Portsmouth, Ironton, Cindomestic article? Cost or production; wages on the part of the Grand Trunk, which owes cinnati, Newport, Covington, Louisville, paid per capita? How many days, weeks the Government \$20,000,000, on which owes interest has been paid, to use its influence for the cause? How many the defeat of a project closely identification. New Albany and Evansville the news will or montain in one last year and the cause? How many the defeat of a project closely identified with

#### An Old Acquaintance.

Among the decisions in customs cases which were rendered by the Treasury Department during the week ending February 9, appears one affecting the duty on chains. An attempt has been made at Chicago to get chains of the class charged with 21/2 cents per pound duty admitted by the customs authorities at the ad valorem rate of 45 per cent., on the ground that they were made to special lengths, and were not adapted to general use, and were, therefore, "manufac-tures of iron not otherwise provided for." The decision rendered was not in favor of the ad valorem rate, but imposed the specific The officials of the Treasury Department

must be very familiar by this time with the principle involved in this appeal for a decision. Several years ago an attempt was made to import "cut hoops" at an ad valorem rate of duty, on the ground that they were not enumerated in the tariff laws and were not to be considered technically as hoop iron, inasmuch as they were cut to length for a specific purpose and could not be used without waste for general purposes. Quite a controversy arose over this question, but the The year opened with ordinary brands of department at length ruled that cut hoops were subject to the specific hoop-iron duty, although the officials were strongly inclined gradual decline commenced, depressing it to in the beginning to admit them at the ad valorem rate. Tank plates were also sought to judge from general facts bearing on the be introduced as non-enumerated manufactures of iron, when imported cut to a particnamely, the anticipation of a reduction of ular size and fitted to be made into tanks the duty—than to commercial ones, such as without further trimming. Car-truck chandemand and supply. From a commercial nels followed in the same path, being composed of channel iron cut to the exact length in an unsound position. The general ex- for a car truck and drilled for the necessary port from England in 1883 shows a moderate bolts. The importers claimed in both these cases that the cutting to length and fitting for a special use of the plates and channels so changed their character that they were not properly classified under the general provisions of the tariff for plate and other rolled iron, but should be admitted as "manufactures of iron not otherwise provided for." Their views, however, did not prevail with the Treasury Department.

After so frequently passing upon this principle, it is remarkable that the department should again be called upon to decide it. The chain question seems to be identical with the cut-hoop, tank-plate and car-truck channel appeals, and has been decided by the Treasury Department in exact conformity with its previous rulings.

#### Ocean Steamship Profits.

The steamship companies in our Transatlantic trade complain more loudly than ever of the small profits derived from their business. Rates of freight for months past have ruled lower than ever before. sides, the emigrant passenger business has naterially fallen off. More than all, when ever for a brief period the state of the American markets favors an export trade in grain, hundreds of the cheapest class of freighting steamers, known as "rovers" or 'tramps," rush in to seize the prize. Inquiries among the various local agencies of freight lines evoke the uniform reply that dividends on ocean steamship stock are reduced to a minimum, and the reason assigned is that too many steamers have been built. Tempted by cheap money in the English market and facilities for placing stock among country people who were prepared to make small investments, the builders on the Clyde and Mersey have overstepped the mark. There is a difference of opinion respecting

the comparative value of slow steamships, afloat to find profitable employment except of steamers has been badly overdone, as the Clyde builders have found out to their cost, while the owners of sailing vessels consider themselves privileged if permitted to live. It must be remarked, however, that the withdrawal of steamers from active service in consequence of lack of employment is already having an effect on freight rates between New York and certain Scotch ports. West-bound cargoes are not now taken on the low terms which ruled up to a couple of weeks ago. Forward contracts for March iron are keenly alive to the changed condi-

very narrow limits. 

tion of affairs in their trade since so many

vessels have been taken off, and freight

vercome and old-time activity again reigns.

The citizens of the Ohio valley realize that been made in the last year? the great Northwest. The policy adopted by the former is said to be "rule or ruin." Rival lines must be operated in the interest of the Grand Trunk. All competition must cease. Public money must not be loaned to build up opposing interests. In response to these claims, the declaration is made that neither Parliament nor the people can be 'dragooned" into compliance with demands so preposterous, nor will the people consent to a huge monopoly covering the entire Dominion. The intimation from a high source that the Government may have reason to dread the power wielded by the Grand Trunk in England and elsewhere excites only feelings of derision. In the United States some will think they find in the revelations now made a clew to the many disquieting reports recently furnished from Ottawa to the New York press. The credit of the Dominion and its banking institutions, as well as the state of trade, the prospects of Manitoba, &c., have all been subjects of severe animadver

#### The Condition of Business.

Business generally is not in a very satisfactory condition in this locality. The demand for most iron and steel products is not what it should be, while prices are exceedingly low. In every direction complaints are rife of the unprofitableness of manufacturing operations, and the establishments which are able to "make both ends meet" are not numerous, if common report can be believed, Nor is this condition of affairs confined to manufacturers of the cruder forms of iron and steel; it is true as well of establishments which convert the products of the blast furnace and rolling mill into finished forms. But the unsatisfactory condition of affairs does not cause the complete cessation of work. Here and there is an establishment which has found it utterly impossible to run any longer, and it has, temporarily we may hope, dropped out of the race. Those which continue at work may be regarded as the best equipped, the best located or the best managed works. In order to keep them in operation ti eir owners are obliged to practice every economy, and to watch closely all the details of their expenses. A very much closer calculation than ever before is now being made of the number of men actually required to perform a given amount of work, and if it is ascertained that even one man can be dispensed with, he "must go." Labor-saving appliances are more in request than ever under such circumstances. Recently we have been informed by a mill owner that, in studying the arrangement of his plant with a view to securing still greater economy, he observed a case in which, by the construction of a simple overhead tramway, he was enabled to dispense with four or five men who had previously transported in barrows what one man could easily shift by means of the tramway. This is only one out of many such instances.

Dull times, low prices and unprofitable business bring with them some little compensation in the fact that they stir men up and cause them to think vicorously what they can do to improve their plant or to make their methods more effective. If work were always abundant, and manu facturers were always pushed, and they always got good, remunerative prices for their products, it is questionable if the plant or the methods or the product would ever be radically improved. They would not need it. Manufacturers operate their works for profit, and when profits cease they then look about them to determine how the situation can be made bett ... The pressure of our present hard times is visibly diverting a number of establishments into channels which their owners would not have selected if trade had continued prosperous. This is manifested in the growing tendency to substitute steel for iron. As the demand for steel seems to be taking deeper root among those who have heretofore been consumers of iron, the iron manufacturers themselves are preparing to supply the growing demand. Those who do not have steel-converting plants (\*) purchasing billets and rolling them to shape in the mills in which they formerly rolled iron. Some of these manufacturers who now roll steel are, however, purchasing their billets abroad, one of them having recently ordered 1000 tons for this purpose This feature of the newly-developed branch of the steel trade cannot be a pleasant one for the contemplation of American steel They certainly ought to be manufacturers. able to furnish all the steel needed in this country. The price of foreign billets is very little below that of domestic billets, and our manufacturers should meet it and thus secure the demand which is now springing up and bids fair to become an important element in supplying the needs of the country.

We present in another column a copy of a resolution concerning compulsory exam tion of stationary engineers in Philadelphia, their pig iron, the Cleveland manufacturers are have agreed to blow out 18 furnaces by have agre

bounds, he mills, and Mr. Abbott to be traveli to be travelic charge of the charge of the control fect known. making abiliting and the espring their employers as Messrs. Common Moore have we rears of exceed to come at least do come at las and the rec others to exer Hayti is pa

lood " more In stamping President Sal rather, the ad actuated by lelled, and, a are to a con-i mercantile cla the country tion, notwiths ment control. a voyage arou

not deeming it advisable to ask for the passage of an ordinance requiring persons who have charge of engines to pass an examination and be licensed by a board. It was argued, among other things, that the qualifieations of an engineer could not be determined by a board of examiners; that, as the examinations would necessarily be always on the same few points, incompetent candidates might become possessed improperly of the correct answers to the ques tions, and thus receive a license; that, furthermore, the passage of such an ordinance would create a privileged class of men with power to fix their own wages, regardless of the value of the service rendered, and also that in case of an explosion the responsibility might be removed from the pro-pristors of the boilers and placed upon the city. Though perhaps not all strictly in accordance with the experience of many, the objections urged against examining and licensing engineers are by no means to be ignored, and reflect severely upon the possi-bilities of such a course. Mr. Nystrom's plan undoubtedly has numerous commendable features, and, if properly carried out (this special point, however, giving rise to grave doubt, would work in the most satisfactory manner. As it is, there is reason to suspect a lack of conscientious work in the matter of examination, and the latter would, therefore, perhaps scarcely guarantee competency on the part of the licensed engineer. Without the ordinance steam users, in case of explo-sion, may be held directly responsible for loss of life or damage to property, while the adoption of the ordinance would very probably offer a convenient means of escape from the penalty attached to gross mis-management and working under conditions known to be dangerous.

#### A Noteworthy Policy.

Prominent among the employers of Mbon in the United States, by reason of the efforts they make to advance the condition of those who are so fortunate as to be in their service, stand the firm of Messrs. Carnegie Bros. & Co., of Pittsburgh. The liberality of the individual members of this firm is well known. Mr. Andrew Carnegie has been a public benefactor in both Scotland and the United States, and his firm have done nobly inproviding elevating and refining influences for their workmen, by establishing readingrooms to which they can resort for intellectual entertainment. Quite recently a system has been established at the Edgar Thomson Steel Works, by which industrions and frugal workingmen will be assisted to secure comes for themselves, and arrangements have also been made to furnish them the necessaries of life at reasonable rates. The workingmen in the employ of this great establishment are now free from the incubus of extortionate prices for rent and food, and their condition has been made much more tolerable than is usually the case. Another instance of striking liberality has just been received.

It gives us great pleasure to announce that Messrs. Carnegie Bros. & Co. have recognized in a very acceptable manner the services and merits of three more of their young men. The firm have admitted as partners, to date from the 1st of January Mesers. Wm. L. Abbott, S. E. Moore and William Bontraeger. Messrs. Carnegie Bros. & Co. have set aside equal shares for these young men, and will charge interest upon their value, allowing all profits and also the savings of the parties to go toward the payment of the debt. In a few years, with the extraordinary success attending the firm in the future which has characterized the past their shares will become the unencumbered

property of the persons named. The history of these three men is remarkable. Mr. Bontraeger entered the service of the firm when a German lad able to speak only a few words of English. He was paid \$25 per month for his services. By his great ability, untiring industry and devotion to the interests of his employers, which knew no bounds, he rose to be manager of the iron mills, and now takes his place as partner. Mr. Abbott has a history akin to this in the commercial branch of the business. He rose to be traveling account. to be traveling agent and then was placed in charge of the office busin office business. Now he en-The third new partner, Mr. ters the firm. ore, has had charge of the accounts of all Messrs. Carnegie Brothers' various enterprises, and although only acting as auditor, he developed rare ability beyond his imme-date department. It is believed that the siret system of accounts always insisted upon by this firm has developed under Mr. Moore's direction into one of the most perfect known. It has been the policy of Carbon Mr. A. Charles and the most perfect known. & Co. to promote their men, aking ability and character the only test, and the esprit de corps whch is found among their employees is the result. A very high standard, no doubt, is required. Such prizes as Messrs. Curry, Bontraeger, Abbott and Moore her. Moore have won come only after many long years of exceptional service, but that they do come at last is creditable alike to the firm and the recipients, and must encourage others to exert themselves as they have done.

Hayti is passing through a "baptism of blood" more sanguinary than open warfare, in stamping out the embers of rebellion, President Salomon and his supporters, or, rather, the adherents of the Government, are actuated by a vindictiveness rarely parallelled, and, as the defeated insurrectionists are to a con-iderable extent mulattoes of the mercantile class, the trade and industries of the country suffer from social disorganization, notwithstanding the cessation of hostili ties and restoration of the ports to Government control. Captain Fearce, of the Atlas and 12 16th guns, or a proportionately larger number of smaller calibers, at a yearly expresses a belief

that Hayti's future is destined to be more prosperous than its past. It is remarked that this is the first revolution on the island which was not successful. The fact that President Salouon is an educated man is also commented upon favorably. Other hopeful signs are the friendly attitude of the agricultural classes toward him and the excellence of this year's crops. The merchants are said to have been conceed to the Governare said to have been opposed to the Govern-ment because it would not allow foreigners to own land in Hayti. Captain Pearce is of the opinion that the coffee crop this year will be enormous, and that as soon as the natives in the interior are satisfied that the war is over they will bring such quantities of coffee into the seaport towns that for a time it will be impossible for the vessels to carry it away. The custom houses at Mira-goane, Jacmel and Jeremie were expected to be reopened on February 14. The United States have heretofore had in the black Republic of Hayti a very good customer.

has of late attracted very little attention in a general way, work having been discontinued until arrangements can be effected to complete it without further interruption. Mr. Haskins, manager of the work, in a recent interview stated that lack of funds is now the main difficulty opposing further operations, and that what has already been accomplished disproves the assertion made some time ago that it was impossible to successfully go on with the work. According to Mr. Haskins, it will take \$5,000,000 to complete the tunnel and the approaches, and with steady work the north tunnel could be completed in 15 months, while the entire work, including the approaches, would oc-cupy about two and a half years.

Consul-General Denny, at Shanghai, reports a serious falling off in the exports of raw silk to the United States, due partly to the spread of disease among the silkworms, but perhaps more to the steadily increasing competition of Japan, whence our manufac-turers obtain a better article. In the cottoncloth trade, on the contrary, the United States are obtaining a larger share, while England is losing her grip. In both cases "honest" goods are at a premium. New York shippers via the Suez Canal say they are doing a larger business, but the rates of freight are not remunerative.

English papers notice the increasing proportion of cargo steamers lost at sea since it ecame difficult to sail them profitably on account of unprecedentedly low freights. New vessels, highly classed under the survey, go down along with the older and weaker ones. It is shown that a steamer of 4000 tons going out from London to an East Indian port may founder in the Bay of Biscay and leave the owner richer by \$100,000. Some restriction must be devised to prevent overloading and over-insurance. A movable "Plimsoll mark" amounts to very little.

Pittsburgh, according to the statements of ne of the burglar fraternity, now makes the best "safe-cracking" tools in the world, sur-passing those of Sheffield, England, whence they were formerly obtained. The assortment includes extension bars, hair-spring saws, bits and drills. A saw capable of going through a piece of merchant bar iron 1/2 inches thick in a few minutes is described as "so small that you could about hide it under "your thumb-nail." Notoriety on account of success in this line of manufacture is not altogether desirable.

#### Report of the Gun-Foundry Board.

The board of army and navy officer appointed to examine and report which of the navy yards or arsenals has the best loca-tion, and is best adapted for a Government foundry and for other purposes, has made its report. The board visited the leading counreport. The board water the reading contries in Europe to ascertain the methods used in reaching the required results. It finds the plan adopted since the Franco-Prussian war in France perfect in theory. By it the Government gives assurances to private companies which induce them to expend the funds necessary to erect new and suitable tools. Under the arrangement the private companies assist up to a point justifying on their part a reasonable outlay of money for a plant, and the Government, though working in this common field as well, yet reserves to itself all the more onerous charges involved in the manufacture of the heaviest ordnance. Mutual checks exist which prevent one party imposing on the other. The board approves the proposition "that the Government should the proposition "that the Government should establish on its own territory a plant for the fabrication of cannon, and should contract with private parties to such amounts as would enable them to supply from the private industries of the country the forged and tempered material." It recommends that the Watervliet Arsenal, West Troy, N. Y., be selected as the site for the armygun factory, and the Washington Navy Yard, District of Columbia, as the site for the navy-gun factory. The following is sub-mitted as the approximate cost of foundry plant :

is figured as follows:
Guns up to sixth caliber
Total

175,000

Additional cost if liquid compression be

Total....

#### Mr. Hewitt on the Tariff.

The following letter was sent by Hon. Abram 8. Hewitt to the Trenton Board of Trade, in reply to an invitation from them to respond to the toast, "Our Manufactures the capital, skill, brain and labor thus em ployed we owe much of our local prosperity," which was proposed at their annual dinner, held in Trenton on the evening of the 14th

regret exceedingly that my duties in Washington will make it impossible for me to be present on the occasion. I regret this the more because it would afford me a convenient opportunity for disabusing the public mind of some prejudices which have been sedulously instilled by interested parties as to the effect of my views in regard to the reformation of the tariff. The industries of Trenton are suffering from useless obstruc-tions imposed by the existing tariff. I seek to remove the obstructions in order that the capital and labor employed in branches of The Hudson River Tunnel, which for a time formed a topic of no little discussion impossible. The removal of the duty upon impossible. The removal of the duty upon scrap iron, for example, which benefits no existing industry whatever, would enable every idle train in Trenton to be run day and night, and the money which is now paid for foreign rods would be largely distributed among the workingmen of Trenton, who are now condemned to idleness through no fault of their own, and every business interest in the city would flourish in a corresponding degree. If the protective system be the panacea for all the suffering of the workingmen and the want of remuneration of cap tal, how comes it to pass that at no time in its history were the industries of Trenton in so unpromising a condition as they are at the present time? The truth is, they are taxed out of existence, and the workingmen lack employment because they have not yet learned the bitter lesson that every dollar of taxation imposed by law is deducted from earnings which otherwise they would have for the support of their families. I do not wonder that the artisans of Trenton do not yet appreciate the evil effect of obstructive duties, when I reflect that for the greater portion of my life I was myself deceived as to the effect of such duties, and have been brought to my present conclusion only after an experience as convincing as it has been disagreeable.

#### WASHINGTON NEWS.

(From Our Own Correspondent.

Washington, D. C., Feb. 20, 1884. On Friday, February 15, the representa tives of the iron and steel industries who had arranged to appear before the Committee on Ways and Means in defense of their interests against the effects of the "Morrison tariff" bill arrived in Washington, and son tarm bill arrived in Washington, and the same day held a meeting for organiza-tion and the preparation of work. This meeting represented So furnaces and ore firms in the States of Pennsylvania, New York, New Jersey, Ohio, Michigan, Wiscon sin and Maryland. Mr. B. F. Jones, of Pitts burgh, was chosen chairman and Joseph D. Weeks secretary. A committee consisting of Messrs. Cyrus Elder, Joseph Wharton, J. G. Butler, Jr., Mark Hanna and Wayne McVeagh was appointed to prepare a formal protest. At a meeting held on Saturday morning the protest was formally read and approved, after which the committee adourned to the room of the Committee or

Ways and Means.

Shortly after the hour named for the hearng, 10 a. m., a quorum of the committee had arrived and was called to order by its chair man. There were present Messrs. Morrison, of Illinois.; Mills, of Texas; Blount, of Georgia; Jones, of Texas; Herbert, of Alabama; Kelley, of Pennsylvania; McKinley, of Ohio, and Hiscock, of New York. Later, Messrs. Hewitt, of New York, and Hurd, of Ohio, joined the committee. The committee room was un-comfortably crowded. The chairman then arnounced that the committee were in readiness to hear what the gentlemen had to say. Mr. Jones, chairman of the united interests of iron, steel and ore before the committee, advanced, and, after a few brief remarks of a general character, read the following pro-test of iron and steel manufacturers and iron-ore producers against the enactment of the Morrison tariff bill:

To the Committee of Ways and Means of the House of Representatives of the United States: The undersigned, representing pro-ducers of iron ores and manufacturers of iron and steel, submit this, their protest, against the enactment of the bill known as the Morrison tariff bill, now under the consideration of your committee, with our reasonable for add the consideration of the committee, with our reasonable for add the consideration. sons for said protest

I. Because of the effect that any reduc-tion of duties must have on labor. The iron and steel business of the country yields to day little or no profit on the capital invested. If the duties are reduced, the selling price of our products must be reduced to compete with the foreign importations. To accomplish this the cost of production must be reduced accordingly, and such reduction must come out of labor. We do not say this because we desire it, but because necessity will compel it.

2. Because a sufficient time has not elapsed since the act of 1883 took effect to ascertain what the consequences of that act will be, or to determine, if a necessity for change exists, in what part of the law the change should be made

3. Because it will not accomplish the re-3. Because it will not accomplish the reduction of revenue which is sought. Experience has shown that the effect of reductions similar to those proposed in this bill has always been to stimulate importations, and, consequently, to increase the revenue.

4. Because of the extreme difficulty of its correct interpretation. The polaricat and

correct interpretation. The plainest and most simple tariff law is at best difficult of interpretation and application, but under the complex system of levying duties provided

its most obnozious form.

6. Because of the great inducement it offers to undervaluation and frauds on the revenue. The provision that no article in the metal schedule shall pay over 50 per cent. ad valorem is a distinct invitation to such undervaluation, and the possibility of such fraud is greatly increased by the four standards of comparison before referred to, viz., the act of 1883, the 20 per cent. reduction of the present bill, the provision that the duty shall not exceed 50 per cent. ad valorem, and the act of March 2, 1867.

valorem, and the act of March 2, 1861.

7. Because of the effect on business that the agitation of this subject will produce.

There are already sufficient elements of disturbance and depression in our business without introducing another, the evil effects of which no one can foresee.

In conclusion, we protest against this bill ecause it apparently indicates the purpose because it apparently indicates the purpose of imposing, permanently, European conditions of labor upon the workingmen of this country, conditions against which foreign laborers revolt, and which they seek this country to escape. The maintenance of an American scale of wages for American workingmen is essential to the good order of our society the schillten of an extensive the schillten of our society, the stability of our institutions, and the general prosperity of the country; and this involves the maintenance of the American policy of protection to home in-[Signed by 113 iron, steel and ore-mining

companies and firms.]
Joseph Wharton, of Pennsylvania, was then announced as the first speaker. He said he regretted the necessity of appearing

before the committee so often. [The chairman, Mr. Morrison, interjected the remark man, Mr. Morrison, interjected the remark that if he had anything to say, it would not be the last time. Major McKinley, also a member of the committee, said: "As long as Colonel Morrison is here you will be compelled to come."] Mr. Wharten then resumed. He said that there had not yet been time for the industries to adjust themselves. sumed. He said that there had not yet been time for the industries to adjust themselves to the new tariff; that now a new bill is introduced to revive agitation. He thought that the industries wanted peace. That prices are constantly declining and are now as low as prudent to go. He did not believe so much in foreign as in domestic markets, and legislation should promote this domestic exchange. He urged that it was necessary to maintain the present conditions of labor at home, and not invite foreign labor. Too little was said about inviting capital. The manufacturers of the United States were compelled to keep pace with the industries compelled to keep pace with the industries of other parts of the world, and if the legislation of this country was designed to bring our conditions down to the basis of capital and labor there, it would be a sad day for all. He gave some idea of the extent of the value of industries to railroad development, which is of benefit to all, by stating that the Carnegie Works alone paid more in freights than was paid in moving the whole cotton crop of the South. These great industries, therefore, cheapen freights for the farmers by justifying the extension of railroad facili-

He showed the competition of Spanish ores, which led to several questions from Mr. Hewitt, of the committee, designed to elicit information favorable to free iron ore. Mr. Herbert, of the committee, also asked a number of questions, evidently designed for information as to the adaptability of Alabama ores to the manufacture of steel by the Thomas Gilchrist and pneumatic processes.
This led to a long discussion about the steel patents and royalties owned by the Bessemer Steel Company, Limited. Mr. Herbert, of the committee, could not understand why, if the ores were suitable, the manufacture of steel did not go to Alabama. Mr. Wharton showed that the South had no capital, and gave other reasons why Northern capital would rather import ores to mix and pay the duties than run the risk of large investments iu the South in the present condition of pub-lic sentiment on economic questions, the unsettled state of society and sectional preju-

dices. Mr. Wharton intimated that capital would never go to the South until some very radical changes took place in the views, habits and customs of a large share of the people who are in a position to appreciate their interests better. Returning to the subject of iron ore, Judge Kelley and Mr. Hewitt indulged in an exchange of shots, the former objecting to categorical answers being demanded on hypothetical questions. The remarks of Mr. Wharton, with the frequent interrogatories put to him, were at times quite spirited.

Mr. George H. Ely, of Cleveland, Ohio, for the Eastern and Western iron-ore associations, gave an interesting review of the iron-ore industry, and showed the injurious effect the removal of the duty of 75 cents a ton would have on a large class of the peo-ple. He said that the Continent was under-laid with iron ore of every variety. He gave an interesting history of the origin and growth of the iron-ore industries on Lake Superior, stating that \$81,000,000 of capital were invested in mining and transporting ore. It was, therefore, a matter of justice and honor not to sacrifice this vast enterprise by bringing in the cheap ores produced by the labor of the half-clad Arabs of the coast of Barbary. The manufacturers at Cres said, agreed on 85 cents a ton, and the tariff act of 1883 made it 75 cents.

Mr. Van Dyck, formerly vice-president of the Menominee Mining Company, also gave a forcible review of the prospects of iron ore. He took exception to Mr. Hewitt's position, which led the latter to remark that he had no interest in foreign, but in American wines.

complex system of levying duties provided by this bill, as in the metal schedule, in which four different standards may be applicable to each importation, it is evident

in the metal schedule an ad valorem rate in more. He said that he thought it was without excuse that the great industries of the United States should be made the foot-

Representative A. Herr Smith and Joseph Wharton, in behalf of the production of nickel, reviewed the varying duties on this nickel, reviewed the varying duties on this article and the effect which placing it on the free list would have. The only nickel mines now in operation in the United States, it was shown, were in Lancaster County, Pa., and the chief competition would come from the mines worked by convict labor in the New Caledonia Penal Colony of France in the South Pacific. Under the act of 1870 the duties were 30 cents for nickel and 20 cents per pound for oxide or alloy with copper. The tariff commission recommended 20 cents a pound for nickel in ore or matte and 25 cents a pound on nickel alloy. The act of 1883 levied a general duty of 15 cents a pound. Mr. Smith said he would like the author of the bill to inform him what had happened in this brief time to convince him that it should be placed on the free list.

J. Wyman Jones, of St. Joseph, Mo., spoke on the lead-mining industry. He traced its development in their own mines from 50 to 800 tons a month, and reviewed the general prosperity and comfort of the laborers, who received from \$1.30 to \$2.75 a day.

Mesers. E, P. Williams, of New York, and John Jarrett, of Pittsburgh, made a very earnest plea in favor of an increased duty on tinned plates. Some representative work-ingmen also added their testimony against any reduction of duties.

These arguments consumed the entire

day. In addition to the general protest, additional papers were submitted to the Committee on Ways and Means, one of which was a memorial and protest by the Eastern Pig Iron Association, representing the manufacturers of pig iron in the States east of the Allegheny Mountains, and another was a statement by Mr. J. B. Moorhead, of Conshohocken, Pa., showing the actual loss in the manufacture of pig iron entailed upon the owners of average furnaces in the Lehigh and Schuylkill Valleys with pig iron selling at present rates. ADDITIONAL STEEL VESSELS RECOMMENDED

組織

(日本)

February 12.—A bill for the construction of seven additional steel vessels was reported from the Senate Committee on Naval Affairs to-day by Mr. Hale. The bill provides for the construction of one cruiser of 4500 tons displacement, the size of the Chicago; one cruiser of 3000 tons displacement, the size of the Boston and Atlanta; one dispatch boat, 1500 tons; two heavily armed gunboats, 1500 tons each, and two light gunboats of 750 tons each. It is estimated that \$2,103,-127 will be required, in addition to the \$1,300,000 already appropriated, to complete the four cruisers now being built. An appropriation of \$3,996,654.62 is needed for the completion of the monitors, including the modern guns. Admiral Porter says that the country wants not less than 10 ships of the Chicago size, 40 to 50 ships of the size of the Boston and Atlanta, 15 or 20 torpedo boats and 15 or 20 gunboats immediately. He says that within four years' time, under the rule adopted of not repairing vesselsthe cost of which exceeds 20 per cent. of the original cost of the ships—almost every vessel now in the navy will go on the retired

THE DUTY ON CHAINS OF SPECIAL LENGTHS The synopsis of decisions rendered by the Treasury Department in customs cases for the week ending February 9 contains the following affecting iron: Chains made to special lengths, and claimed not to be adapted for general use, but for special purposes, and to be therefore dutiable at 45 per cent. ad valorem, as manufactures of iron not otherwise provided for. Held, that they were liable to duty at the rate of 2½ cents per pound under Paragraph 171 for chains of all kinds of the sizes therein specified. (Let-ter to Collector of Customs at Chicago, Ill.)

ter to Collector of Customs at Chicago, III.)

A FEATURE OF THE MEXICAN TREATY.
February 15.—One of the objectionable features of the Mexican treaty, pending before the Senate, was disclosed this morning, when Senator Farley, of California, presented a memorial from the Trinidad and San Jose Silver Mining Company of Mexico, who have their headquarters at San Francisco. This memorial calls the attention of the Senate to the fact that the proposed treaty legalizes claims of Mexican citizens. treaty legalizes claims of Mexican citizens, lecided adversely by the United States Mexican Joint Claims Commission, but for-ever bars claims decided against American citizens by the same tribunal.

THE TREASURY EXPERTS AND THE MORRISON

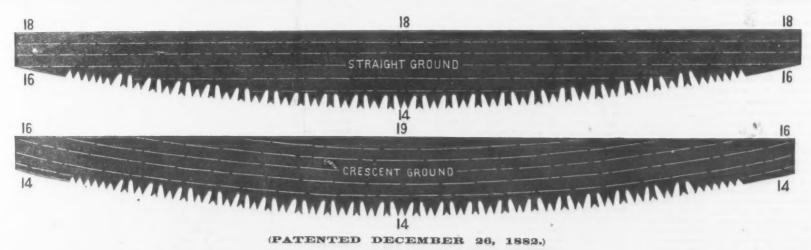
February 17.—The Treasury experts have completed their first essay on the Morrison bill. They have not been able in a great many cases to show what percentage of reduction should be applied to various ar-ticles. Taking some of the items, it would appear that the Morrison bill would increase instead of diminishing the rate of duties now paid. For example, in the item of wire, the present rate on iron or steel wire, smaller than No. 5 and not smaller than No. 10 wire gauge, is t 1/2 cents a pound by the Morrison bill, according to the figures of the Treasury experts. While the rates on iron wire of the same size will be reduced to 13/2 cents a pound, the rate on steel wire will be in-Mr. E. S. Wheeler, secretary of the New Haven Rolling Mill Company and an importer, spoke in favor of free wrought scrap, which would enable his company to manufacture wire rods. In reply to ascertain from the figures what the reduction will be, but apparently that were will stand where it is. Taking the whole were sched-ule together, the only reduction will be .4 of that the difficulties will be increased, not simply fourfold, but many fold.

5. Because of the extension of the system of compound duties. The iron trade has always objected to this system. It has constantly favored specific duties in place of all valorem; but this law, while it estensibly retains specific duties, applies to every article.



The tempering processes and machinery under which The "SIMONDS" Saws and Knives are manufactured are covered by 7 different patents and 19 separate claims.

The method of adjusting the Circular Saws—made necessary by the expansion of the steel caused by centrifugal force—is protected by patent number 239,863, dated April 5, 1881, and the Saws so adjusted by patents number 207,450, dated August 27, 1878, and 237,617, dated February 8, 1881, the claims reading as follows: 1st, A Circular Saw made "firm" with reference to its radii, but "loose" with reference to its diameter; 2d, A Circular Saw "loose" with reference to its diameter, and also "loose" with reference to its diameter more "loose" at the eye than at any other point.



Cross-cut Saws have heretofore been ground in a straight line from end to end, as shown by broken lines in cut marked Straight Ground. As a result, a saw made 14 gauge thick at the center of the edge of the saw, and beveled to 18 gauge at the back, will be but 16 gauge thick at the edge near the end of the saw, or, in other words, the teeth vary two gauges in thickness on the edge of saw, as shown in diagram. The improvement consists in grinding the saw in crescent lines, parallel or substantially parallel to the cutting edge, as shown in cut marked Crescent Ground, in which case the edge or teeth are of even thickness, while the inequality is thrown into the back, and the thickness of the saw remaining the same across its center as when ground the old way, the ends are increased two gauges in thickness. The advantages are apparent.

# SIMONDS MANUF'G CO.,

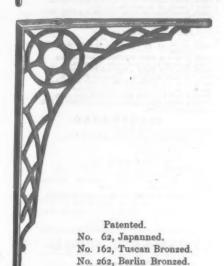
FITCHBURG, MASS.

CHICAGO, ILL.

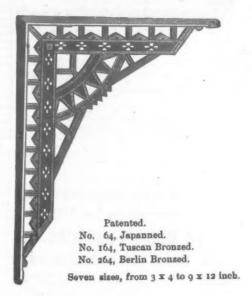
SARGENT & CO.'S

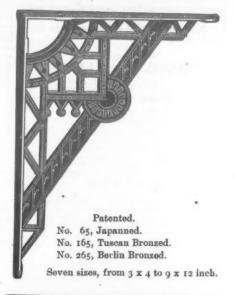
PLAIN AND ORNAMENTAL

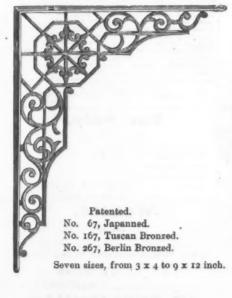
SHELF BRACKETS.



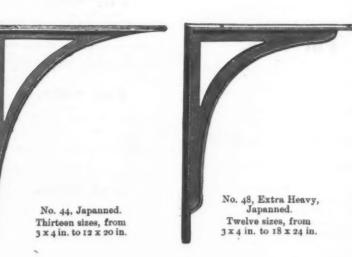
Seven sizes, from 3 x 4 to 9 x 12 inch.

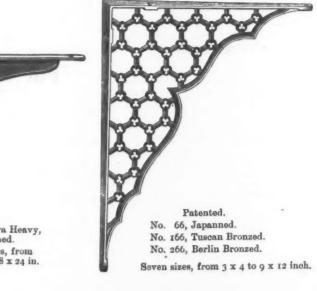


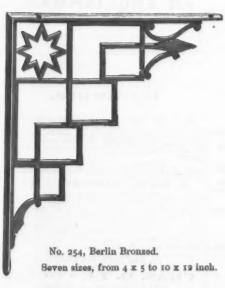


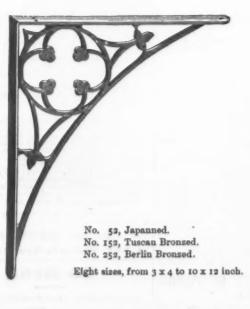


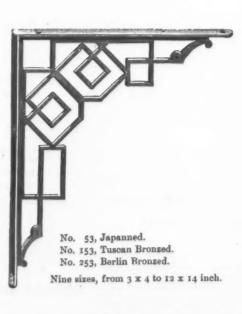


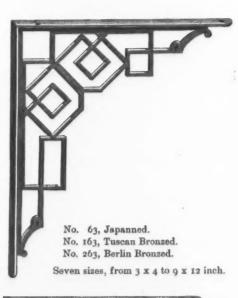












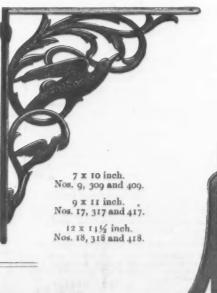












SARGENT & CO.,

NEW YORK AND NEW HAVEN, CONN.

#### Special Notices.

#### RECENT BOOKS.

Turnbull.—Treatise on the Compound \*Engine.—By John Turnbull, Jr. Revised, with additions, by Prof. S. W. Robinson, C. E.; illustrated with diagrams and tables, 192 pages, 18mo, boards. . \$0.50

This little volume is divided into two parts. The first part treats only of the Woolf com-pound engine, in which there is no receiver and where the high and low pressure cylinders are in immediate steam connection. The second part has been added to make the The second pare has been added to make the treatment more general and complete, and to include the intermediate receiver, clearance and cushion. Both the analytical and graphical methods have been employed, and it is claimed that by the diagrams presented any engine of the type discussed can be correctly laid out. rectly laid out.

#### FOR BALE BY DAVID WILLIAMS, 83 Reade Street, New York.

#### For Sale.

One 8-in. x 10-in. Vertical Engine.
One 8-in. x 12 in. Horizontal "
One 12-in. x 2-in. "
One 30-in. x 6-ft. Vertical Boiler.
One 36-in. x 7-ft. "
Two 54-in. x 16-ft. Horizontal Tubular Boilers.
One 60-in. x 16-ft. " n. x 16-ft "CHARLER W. ERVIEN & CO.,
420 Ireland Street, Philadelphia, Pa.

#### WANTED.

A position as Salesman, by one who has had several years' experience in the Hardware Business. Would be pleased to communicate with any one desiring a Salesman, either in New York City or elsewhere. Address Office of The iron Age, 83 Reade St., New York.

#### Wanted.

A SECOND HAND GATES NO. 3 CRUSHER, warranted in good condition.

State lowest price and where it may be seen. "CRUSHER," Office of The Iron Age, 83 Reade St., New York.

#### Wanted.

A Salesman in an Iron House. One who is capa ble of handling Pig Iron and has trade in Pennsyl-" B. & R.," Address

Office of The Iron Age, 220 S. 4th St., Philadelphia.

#### Wanted-Partner,

IN THE GENERAL MACHINERY BUSINESS To a man with capital a fine opportunity is offered in a house doing a good business and of established reputation

For particulars, address "MACHINERY," Office of The Iron Age, 83 Reade st., New York,

#### Wanted.

A man to handle Engines and Boilers in New York City for a Philadelphia Manufacturer. Address

"BOILERS,"

Lock Box 2161, Philadelphia P. O.

#### Wanted.

A 20 or 25 Horse-Power Portable Engine and Boiler, warranted in good working condition. State lowest price, make, when built, how long in use, for what purpose used, and where it may be "ENGINES."

Office of The Iron Age, 83 Reade st., New York HOOK-KEEPER.

A good Penman and a rapid and accurate Accountant wants a position in the Hardware Business. Ten years experience.

Address "BOOKKEEPER,"
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#### HARDWARE.

For Sale.—A clean stock of Hardware, in one of the most thriving towns in New York, and a good paying business; stock of \$13,000, but can reduce to suit purchaser. Reasons for selling out, not con-nected with the business,

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#### Wanted.

To communicate wi'h some Eastern parties who are desirous of establishing an agency for their goods in Chicago, by a gentleman of business experience. Hardware preferred.

Address "HARDWARE," 481 Wabash Ave., Chicago, Ill,

#### **Estimates Furnished**

and contracts taken for power shears, power punches, steam hammers, steam riveters, boiler plate planers, and heavy punches made at reasonable figures. Work guaranteed.

B. GRAVES LOUDEN,

22d St. and Washington Ave., Philadelphia. WILL OFFER below market rates the following : NAILS,

LOCKS.

SCREWS, AND STRAP AND T HINGES.

A. W. WHEELER,

141 Lake Street, Chicago, Ill. SITUATION WAN (ED—By Hardware Salesman of to years' experience and acquaintance with jobbing trade throughout the West, South and Northwest. Best of references.

Address
Office of The Iron Age, 83 Reade St., New York. FOR SALE.—To party with \$20,000 to \$25,000 cash capital, a good paying Haraware Business in Colorado. Good reason given for selling.

"BOX 2634," Denver, Col.

#### Wanted.

From 2 to 4 miles 16-lb. Light T Rails, second-hand Address R. BALLAUF & CO., Jefferson, Texas.

YOUNG MAN who has a thorough knowledge of a set of books, and has had 9 years' experience as Seiling Agent for an Iron Manufacturing firm, desires a position in the Spring in a Western Hardware firm. Best of references given. Address "46," Office of The Front Jept Spaced Sh. New York

#### Special Notices.

#### For Sale or Exchange.

A party owning a complete Plate and Sheet Mill as per following list, will sell the whole or part of it for cash and long-time payments, or will exchange for Real Estate desirably located in any of the following caties: New York, Chicago, St

Louis or St. Paul.

z Train of Lauth's 24-in. 3-high Rolls.

z Train of 2-bigh 22-in. Flate and Sheet Rolls and Duplicate Rolls.

z Train of 30-in. Soft Rolls and Duplicate Rolls.

z Compound 13-in. Muck Train and Duplicate Rolls.

z Large Engine. 32 x 42, horizontal, 20-ton fly, doubly-braced, wheel ze in, face.

z Large Rotary Squeezer for 130-ib. Ball.

Large Roll Turning Lathe for Turning-up Rolls.

Large Pump.

Large Cranes for Handling Housings and Rolls.

Plate Shear to shear as high as %-in. Plates.

Sheet Shear.

Shaping Shear.

Muck Shear.

Muck Shear.
Scrap Shear.
Scrap Shear and Engine.
Scrap Shear and Engine.
Large Sturtevant Blower and Pipe.
Blacksmith's Drill.
Turnace Plates for 8 furnaces, including Annealing and Pair Furnace.
Purnace Plates for 4 Charcoal Fires, including Annealing and Pair Furnace. Parnace Plates for 4 Charcoas Fig. Valves, &c.
Valves, &c.
Battery of 2 extra flange Fire-box Boilers: size, 28 ft. by 48 in.; 2-flue, 16 in., to operate together or separate; with all connections.
Large Boiler, fire-box-metal, 28 ft. by 42 in., or

44 in. 44 in. Small Boilers, 22 ft. by 42 in. 5 mail Boilers, 22 ft. by 42 in. Track Scale, Wagon Scale, Mill Scales, Tools, Tramways, Buggies, Patterns, &c. ADDRESS

H. W. WHITLOCK, 130 Dearborn St., Chicago.

#### To Rent or For Sale.

One Three-story Brick Building, 30 x 50 feet Heated by steam with 30 horse-power Engine Desirably located at Meriden, Conn., for manufac

turing purposes. Apply to THE HALL RAILWAY SIGNAL CO.,

#### For Sale.

Half interest in first-class Foundry and Machine Shop, doing good business and owning valuable patents. Other business cause of selling. Address

E. H. HASTINGS, Bath, N. Y., or, 5 Bowling Green, New York City.

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A 1-ton Helve Hammer, built by Merchant & Morgan, Alliance, Ohio.

Drawings of the same furnished on application NORWAY STEEL & IRON CO.,

South Boston, Mass.

#### SAMUEL, SONS & BENJAMIN,

No. I RUMFORD PLACE,

LIVERPOOL, ENGLAND

introduce in the British and Continental markets American Hardware and specialties of merit.

Correspondence solicited through their Cana

M. & L. SAMUEL, BENJAMIN & CO.,

Hardware, Metals, &c.,

by a well-established manufacturing company in by a wen-estatonished manufacturing company in hassachusetts, well located, with ample water-power, New Buildings, Tools and Machinery, capa-ble of producing Sicc,cop par annum. Sales, 183, \$40,000. Special inducements and absolute control offered to the right man. Business: Haroware and House-Furnishing Goods, with ample facilities for contract work.

Treasurer Wanted,

for contract work.

Ample Room and Power for consolidation with another concern making similar goods, or in the lines named. Our object is to divide a rather large expense account and double sales.

Address

"JAMES,"
Office of The Iron Age, 83 Reade Street, New York.

#### Valuable Business Opportunity.

A firm engaged in the manufacture and sale of standard machines in universal use and protected by numerous letters patent desire to sell the business, patent, good-will and all plant pertaining thereto. The business has been established since 1846, and the reputation of the goods is world-wide. Satisfactory reasons for selling, and a full statement of assets, business profits, &c., will be furnished to responsible parties, but to principals only. Address

Office of The Iron Age, 220 S. 4th St., Philadelphia

#### Wanted.

By an Eastern Tin Plate, Sheet Iron and Metal House, a representative residing West, who will sell their goods on commission, in connection with Stoves and Stamped Ware, in the States of Iowa, Nebraska, Kansas and Missouri. Address "TIN PLATES,"
Office of The Iron Age, 8, Reade Street, New York.

#### SALESMAN WANTED

in the New York office of a manufacturing com-pany; a first-class man of good address and expe-rience, as inside and outside salesman. One familiar with the Machinery and Hardware trades preferred. Address, stating age, experience, reservaces and compensation expected, "MACHINERY," Box 34, Office of The Iron Age, 83 Reade St., New York,

A SUCCESSFUL Wholesale and Retail Hardware House wants to increase its capital and would correspond with a capable man of means desiring an active business. This is an opportunity for one in search of health or profit. The climate is unexcelled, and the city the commercial center of two Territories.

References given and required.

Address

ALBUQUERQUE HARDWARE CO.,

Albuquerque, New Mexico WANTED—A gentleman with knowledge of me-chanice, familiar with machinery, and with ex-ceutive ability, to take charge of the office of a manufacturing company in Boston. Address, with reference, CLARKE, P. O. Box 672, New York City.

#### Special Notices.

# New and Second-hand

Two to the planer, planer is fit, long, 30 x 30 B, New One or the planer, planer is fit, long, 30 x 30 B, New One to the planer, planer is fit one as a fit of the planer is fit one Upr't Back geared Self-feed. 38 in. Drill, New One of the second secon 10 15 12 8 Second hand Send for Lists of Machinery, just issued.

THE GEO, PLACE MACHINERY CO.,

#### 121 Chambers St., New York.

#### To Brass Foundries.

To Brass Manufacturers.

# Our new foot press, for cutting off GATES from brass castings by FOOT power, is now ready. Weight, 250 lbs. Frice complete, \$56, net. A boy can operate teasily. We warrant them to give the most perfect satisfaction. FEERLESS FUNCH AND SHARE CO. 36 W. Dey Street, . 6w York

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CAST IRON HOT-BLAST PIPES-THOMAS PATENT.

38 Hot-Blast Oven Pipes for Thomas Oven, in first-class order. Price, r cent per ib., cash, a our works. Size, 13 ft. x o inches. A bargain. SHOENBERGER, SPEER & CO.. Pittsburgh, Pa.

#### For Sale.

SHEAR FOR CUTTING STEEL RAILS. Weight, about 12 tons. Can be seen Also

SCRAP AND PLATE SHEARS. A. G. BROOKS, 261 North Third Street, Philadelphia, Pa

For Sale.

## 45 in. Column Drill Press. Wm, Sellers & Co. 24 in. x 24 in. x 5½ ft. Planer.

6 Small Drill Presses. Small Shaper. Pratt & Whitney. 

#### For Sale.

Corliss Engine—One, 18 x 48. 100 H. P. Woodruff & Beach Engine—One, 14 x 36, 60 H. P.
Write for full particulars,
ROBERT WETHERILL & CO., Chester, Pa

#### FOR SALE.

To Furnace Manufacturers, Patent Exhibitors To Furnace Manufacturers, Patent Exhibitors and others.
Arranzements can be made to work Sutcliffe's Self.Feeding Super-Heated Air Furnace. Patented in United States and a proved success in England, good royalties being obtained. The Patent Rights will be sold or shared with any respectable firm who will introduce it into the American market. Address
S. & P.,
Office of The Iron Age, 83 Reade st., New York.

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Root Blowers, Nos. 4. 2, 4 and 7; Baker do., No, 4%; Sturtevant do., Nos. 6. and 7; Baker do., No, 4%; Sturtevant do., Nos. 6. and 7; do. Exhausters, Nos. 2, 4, 5, 33 and 39; Clark do. (Foundry); Baxter Engine (Colt's make, 6 H.-P., a bargain; Vertical do., 2½ x 5; Horizontal do., 2x 6; a fine Pulley, 6e x 10½, perfect. \$18; I ron Planer, 3e x 25 x 8 ft. (Hewes & Phillips); Watson Nc. 1 P. Forge. Ail kinds of machinery bought and sold on commussion for parties out of town.

C. R. BIGELOW, M. E.,
18 New Church Street, New York City.

#### Hardware Dealers or Agents WANTED,

to whom a liberal discount will be made to sell the following Second-hand Engines and Bollers

at once: 3 H.-P. Engine and Boiler, used 14 months. 25 " 3 BULLELS.

40 " Bew.
Also over 200 New Engines and Boilers, all sizes, ready for immediate shipment.

H. M. SCIPLE,

Philadelphia.

#### 107 North Third Street, Philadelphia Wanted.

No. 1 wrought scrap iron, old iron and steel rails, wrought-iron turnings, cast-iron borings and burnt iron. Name quantity, lowest price and

point of delivery.

JOS. J. LIPPINCOTT & CO., 131 South Fourth Street, Philadelphia, Pa.

#### Wanted.

Agents to sell Tubular Lantern Lighters everywhere. Fits all styles. Sells at 25 cents. 400 matches, 30 cents per box. Old styles made better than new. Self-Lighting Lamp Burners; turn a key and lamp is instantiy lighted. Hardware Commercial men please notice. Address. P. O. Lock Box 589, 76 Beekman Street, Chicago, Ill. New York.

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Blast Furnace Manager, with 17 years' experi-ence, wants a position. Age, 13 years. Address. "F. P. D." Office of The Fron Age, 36 Clark St., Chicago, Ill.

#### Special Notices.

## NEW AND SECOND-HAND

## MACHINERY

\*\* Boring Lathe, \$5 in., swing. Second-hand.

\*\* Engine Lathe, 28 in. swing. x 8 ft. bed.

\*\* delated. Lathe, 20 in. swing, 12 ft. bed.

\*\* Engine Lathe, 20 in. swing, 12 ft. bed.

\*\* Engine Lathe, 20 in. swing, 8 ft. bed.

\*\* Engine Lathe, 20 in. swing, 8 ft. bed.

\*\* Engine Lathe, 20 in. swing, 5 ft. bed.

\*\* Engine Lathe, 20 in. swing, 5 ft. bed.

\*\* Engine Lathe, 20 in. swing, 7 ft. bed.

\*\* Engine Lathe, 18 in. swing, 21 ft. bed.

\*\* Engine Lathe, 18 in. swing, 21 ft. bed.

\*\* Engine Lathe, 18 in. swing, 21 ft. bed.

\*\* Engine Lathe, 18 in. swing, 20 ft. bed.

\*\* Engine Lathe, 18 in. swing, 20 ft. bed.

\*\* Engine Lathe, 21 in. swing, 20 ft. bed.

\*\* Engine Lathe, 21 in. swing, 20 ft. bed.

\*\* Engine Lathe, 21 in. swing, 20 ft. bed.

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\*\* Engine Lathe, 21 in. swing, 20 ft. bed.

\*\* Engine Lathe, 21 in. swing, 20 ft. bed.

\*\* Engine Lathe, 21 in. swing, 20 ft. bed.

\*\* Engine Lathe, 21 in. swing, 3 ft. bed.

\*\* Hand Lathe, 21 in. swing, 3 ft. bed.

\*\* Hand Lathe, 21 in. swing, 3 ft. bed.

\*\* Hand Lathe, 21 in. swing, 30 ft. bed.

\*\* However, 18 ft. swing, 30 ft. bed.

\*\* Froot-Power Hand Lathe, 85 in. swing, 35 ft. bed.

\*\* Iron Planer to plane 36 in. x 31 in. x 12 s. a-bd.

\*\* Iron Planer to plane 36 in. x 31 in. x 12 s. a-bd.

\*\* Iron Planer to plane 36 in. x 31 in. x 12 s. a-bd.

\*\* Iron Planer to plane 21 in. x 20 in. x 5 ft.

\*\* Ab.

\*\* Iron Planer to plane 21 in. x 20 in. x 3 ft.

\*\* Iron Planer to plane 21 in. x 20 in. x 3 ft.

\*\* Iron Planer to plane 22 in. x 20 in. x 5 ft.

\*\* Swing Machine, 12 in. stroke, 23 in. traverse.

\*\* Shappin Machine, 12 in. stroke, 23 in. traverse.

\*\* Shappin Machine, 12 in. stroke, 23 in. traverse.

\*\* Shappin Machine, 25 in. stroke, 23 in. traverse.

\*\* Shappin Machine, 15 in. stroke, 23 in. traverse.

\*\* Shappin Machine, 15 in. stroke, 24 hand.

\*\* Shappin Machine, 25 in. stroke, 34 hand.

\*\* Shapp

Engines and Bollers, Cheap.

Needing the space which they occupy, will sell he following goods very low and on favorable terms:

1 35 H. P. Horizontal Stationary Engine. New.
120 H P. Horizontal Stationary Engine. New.
13 H. P. Horizontal Stationary Engine. 2-band.
15 H. P. Horizontal Stationary Engine. New.
15 H. P. Vertical Stationary Engine. New.
15 H. P. Vertical Stationary Engine. New.
15 H. P. Vertical Stationary Engine. New.
16 H. P. Vertical Stationary Engine. New.
17 Portable Engine and Boiler, 15 H. P. 2"-hand.
18 Lecomotive Boiler, 15 horse-power. Second-hand.
18 Vertical or Upright Boiler, 10 horse-power. New.
18 Baragwanath Steam Heater. New.

If the list does not contain what you want, write us. J. M. BADGER,

#### 49 DEY STREET, New York City. To Rent.

One-half of a Two-Story Brick Building, 400 x 60 feet. This building is situated in Bridgeport, Conn., on line of N. Y., N. H & H. R. R. It is entirely new and is thoroughly heated by Hot Air, and lighted throughout by Edison Incandescent Electric Light. Any amount of Power can be furnished up to 250 Horse-Power. Terms reasonable. Address

### THE CORNWALL & PATTERSON MFG. CO., Bridgeport, Conn Hardware.

An excellent opportunity to purchase an interest in a long and well established Wholesale House and paying cor

Office of The Iron Age, 13 W. 3d st., Cincinnati, O.

"OPPORTUNITY."

#### Wanted.

#### HEAVY CASTINGS AND ROLLS.

Wanted to buy Old Heavy Castings and Rolls of MATTHEW GILL, Jr., & CO.,
1240 N. 9th St. (below Thompson St.) Philadelphia

#### Wanted.

(Old)

IRON AND STEEL ROPE, and Iron and Steel of any kind.

1940 North Ninth Street, (below Thompson Street), Philadelphia.

#### Special Notices.

#### New & Second-Hand Machinery.

I Engine Lathe, 10 in. x 3½ ft.
1 each, Engine Lathes, 11 in. x 4 and 5 ft.
2 each, Engine Lathes, 11 in. x 5 and 8 ft.
1 Engine Lathe, 14 in. x 5, 6 and 8 ft.
1 Engine Lathe, 18 in. x 6, 8 1 and 10 ft.
2 in. x 6 in. x 6, 8 1 and 12 ft.
2 in. x 6 in. x 6, 8 1 and 12 ft.
2 in. x 6 in. x 6, 8 1 and 10 ft.
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5 in. x 6 in.
5 i

Engine Lathe, 16 in. x 6 ft.
each, Engine Lathe, 18 in. x 6 ft.
each, Engine Lathes, 18 in. x 6 and 8 ft.
Planer, 2x 2x x 5 and 6 ft.
25 x 3x x 5 ft.
26 x 30 x 5 ft.
27 in. x 50 in. x 50 in. x 17 ft.
10-in. Shaper,
28-Shadie

ic-in. Shaper. 2-Spindle Edging Machine. Bolt Cutter, to take sizes to 14 inch. Merriman. Lincoln Pattern No. 2 Millers. All kinds Machinists' Tools and Supplies.

NEW YORK AGENCY OF
THE TANITE CO., GRANT & BOGERT MACHINE

TOOL WORKS, and for the NEW POLISHED SCIAFTING. H. PRENTISS & CO., 42 Dey St., N.Y.

#### For Sale.

The Industrial Works of Shamokin, owned and successfully carried on for a number of years by the late Wm. Brown. deceased, consisting of Foundry and Machine Shop, and a large steek of Patterns regarded as part of the property. Boiler Shop, Blacksmith Shop and Factory for the manufacture of heavy coal screens. Well located in the borough of Shamokin, Pa., with the best facilities for shipping by rail, and surrounded by a district contributing all the work that a shop of that kind can possibly turn out. Easy terms of payment are offered to suit a purchaser of limited capital For list of Tools and further particulars apply to WM. McLLVAIN & SONS, Manufacturers of Boiler Plate and Tank Iron, Reading, Pa.

#### For Sale.

TWO SUGAR PACKERS. ONE MIXER. ONE VACUUM PUMP All in good condition

GEORGE B. GRAHAM, P. O. Box 689, Baltimore, Md.

### Wanted. A Partner with \$5000 to \$10,000 in a Foundry and

Machine Business, established in 1824. For pariculars, inquire of L H. COLLER, Poughkeepsie, N. Y. AN ENGLISHMAN,

Recently arrived, desires employment of any kind. Satisfactory references. Well acquainted

GEORGE JAMES,

with the Hardware business. Address

#### Office of The Iron Age, \$3 Reade St., New York. Hardware.

An excellent opportunity to engage in the whole-sale trade for one who can command \$25,000, or would like to join hands with a good live concern in the South or Northwest, and put in as capital the stock, which is in excellent condition and well

Address "C. W. C.,"
Office of The Iron Age, 36 and 38 Clark St., Chicago, Ill A RARE OPPORTUNITY

for a man who can command \$3000 or \$4000, in a retail Hardware, stove and Tinware business. Stock is being turned from three to four times per year; small competition. The town is situat-d in "Genesee Valley." N. Y.; inhabitants, about 3000. Splendid Railroad facilities. The business reputation of this town is unquestionable. Must quit business on account of health.

Address
Office of The Iron Age, 83 Reade St., New York. CHAS. O. LE COUNT,

PURCHASER OF HARDWARE (Twenty Years' Experience). CORRESPONDENCE SOLICITED. Refers by permission to Messrs, SARGENT & CO., New York. WIEDUSH & HILGER HARDWARE CO., New York. Messrs, J. S. BROWN & CO., Calveston. Texas.

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4 Stone Street, Room 69. EXCHANGE MEMBERSHIPS.

LEIGH'S DISCOUNT BOOK Specially arranged for the use of the HARDWARE TRADE

Address E. B. LEICH, Sec'y The American Brake Co., St. Louis, Me Hydraulic Presses

Acknowledged by ALL the best work of the kind ever published. Price by mail OME DULLAR.

FROM 50 TO 2000 TONS PRESSURE. Special Hydraulic Machinery Constructed. B. GRAVES LOUDEN, Twenty-second st. and Washington ave.,

Philadelphia. CITUATION WANTED.—To Superintend an Iron of Strass Enuractory. Am a Machinist by trade and have a good experience in both branches in the management of shops and hands, and familiar Machinery and Kerosene and Hrass Work generally. Address W. O. Likkolla, increase, Fairhaven, Mass.

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\$5.00 \$5.00 \$5.00 \$5.00 \$5.00 \$10.00

#### Special Notices.

# Hopkins' 'Handy Notes and Queries."

An entirely original advertising medium INCOMPARABLY THE BEST ever presented for the patronage of the HARDWARE TRADE.

Conceded by all who have seen it to be an indispensible Cyclopedia of Facts and Special Information, which when once brought within the knowledge of the Dealer, will be kept until worn out in service.

DURING 1884, SIX EDITIONS, 30,000 Copies, will be distributed gratuitously throughout the United States as an Advertising Medium.

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No better opportunity will be offered Manufacturers to reach the ENTIRE TRADE OF THE COUNTRY at a nominal expense, as nothing published as an advertising medium compares with it of permanency. Paice, in Entire Edition, \$15 a Pace; Good For One Year's Adventising among 5,000 Dealers. For further information, Advance Service Property Property No. HENRY HOPKINS,
Publish

P. O. Box 2585 New York.

# FULL ILLUSTRATED CATALOGUE

SENT ON APPLICATION to Manufacturers, Mills and Railroads, or to parties going into manufacturing, on Machinery, Tools and Supplies of all kinds, Engines, Pumps.

JACKSON & TYLER, Nos. 16 and 18 South Howard St., Baltimore, Md.

## J. SEIDEL,

## Commission Merchant,

Box 662.

HABANA, CUBA,

Will be happy to accept the representation of first.c. ass houses manufacturing hardware. Bills paid and collected on commission.

Reference:

COLLINS & CO., 213 Water Street, New York.

#### GREAT BARGAINS IN New First-Class Machine Tools Sold on 30 days' trial to responsible parties if desired.

Engine Lathes, 16 in. swing, 6 and 8 ft. bed. Engine Lathes, 18 in. swing, 8 and 10 ft. bed. Engine Lathes, 20 in. swing, 12½ ft. bed. For prices, cuts and descriptions, apply to

JOSEPH B. REED, Cairo, III.

### For Sale. ENGINES AND BOILERS.

Two Wright Automatic Cut-off Engines, 22 X 42 Two Dexter Automatic, 40 and 150 H. P.

One 16 x 36 Slide-Valve Engine. One 20 X 36

One Corliss Condensing Beam Engine, 500 H. P. Two Horisontal Tubular Boilers, 4 ft. x 16 ft. One Vertical Tubular Bofler, 9 H. P. All the above guaranteed in good working

NEWELL UNIVERSAL MILL CO., 10 Barclay Street, New York.

## For Sale.

4. 6. 8. 10. 20, 40, 60 and 100 H.-P. ENGINES. All classes and styles. Portables, BOILERS, PUMPS. &c. The BEST Screw-Cutting ENGINE LATHES. to lip. to 36 in. awing. Fine new PLANERS, DRILL PRESSES, SHAFERS, and other Machine Tools. BOLT CUTTERS. NUT TAPPERS, HEADING MACHINES and PUNCH PRESSES, &c. Quality and prices unsurpassed.

Quality and prices unsurpassed.

S. M. YORK, Cleveland, Ohio.

### STEAM PUMPS For Sale.

A large number of Steam Pumps of all makes, and ranging in size from small tank or boiler feeds up to very heavy service machines.

While the stock lasts good bargains are open for Miners, Water Works, Rolling Mills, Furnaces, or any one needing to move fluids by steam.

Call upon or address.

Call upon or address
JNO. A. HINCKLEY
Purchasing Agent of the United Pipe Lines,
Oil City, Pa.

#### For Sale.

The largest stock of New and Second-hand Engines, Boilers, and general Machinery in the West. Send for Catalogue. Hoisting Outlits for Coal Mining and other purposes a specialty. WARREN SPRINGER,

195 to 219 South Canal St., Chicago

### For Sale.

Becond-hand

# DROPS and LIFTERS

BEECHER & PECK,
Lock Box 123, New Haven, Conn.

### For Sale. MACHINES

For Making Picks, Mattocks, Axes, Solid Steel Hammers and Sledges, with Adse Eyes or Solid-Punched Eyes. T. & CO., Box 25,

Office of The Iron Age, 83 Reade St., New York, MANUFACTURERS' CATALOGUES

Respectfully Solicited by MORRISON & PACKWOOD,

Agr'l Implements, Hardware, &c., DEALERS TAMPA, PLORIDA.

## Special Notices.

# ENGINES AND BOILERS.

by 40 in. Upright Boller, 22 H.-P.
by 30 in.
by 30 in.
by 30 in.
by 30 ft. Plain Cylinder Boller.
Upright Drill. Prentice.
New Haven Mfg. Co. ne 24 in. "New Haven Mrg. Co.
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## HENRY I. SNELL,

135 N. Third Street, Philadelphia.

WILSON'S

"Automatic" Gas Producer.

(NEW PATENT.)

FOR FIRING STEAM BOILERS AND EVERY DESCRIPTION OF FURNACE.

The undersigned is open to receive offers for the manufacturing rights and sole agency for this valuable invention in the United States.

Address

A. WILSON, Taugye's Steel Works,

#### Birmingham, England. A CHICAGO FIRM

doing a large wholesale business throughout the Northwest want to correspond with a me reli able manufacturers of Merchant Iron, Steel, Nails, Railroad and Builders' Supplies, &c., not already represented at Chicago, with a view to the exclusive handling of their product in the Northwestern Address

Y. Z. & CO., Office of The Iron Age, 36 & 38 Clark St., Chicago, III

# E. BISSELL & CO.,

Wholesale Hardware Auctioneers, 83 Chambers and 65 Reade Sts., N. Y.

Sales held weekly for the trade. Consignments solicited. We refer to the leading manufacturers and importers. [FOUNDED 1848.]

[INCORPORATED 1884.] PATTERSON BROTHERS, New York, January 31, 1884.

The copartnership heretofore existing between H. A. PATTERSON. E. C. PATTERSON and M. C. BROTHERS, expires by limitation, and is dissolved this day.

BROTHERS, expires by limitation, and is dissolved this day.

The successor of the said firm is PATTERSON
BROTHERS a corporation duly formed under
the laws of the State of New York. which corporation will continue the Hardware and Metal business at the old stand, 27 Park Row, New York.

All outstanding accounts and contracts of the
firm are assumed, and will be settled by the said
corporation.

## For Rent.

A well-equipped Rolling Mill, with a secured custom, on favorable terms. LOCK BOX No. 12,

Address

#### Philadelphia Post Office. Wanted.

A Partner in an establi hed wholesale Iron, Stee A Partner in an estab. I not wholesand from, seech and Heavy Hardware and Wood stock. A capital of from \$12,000 to \$15,000 required. The place is one of the best points for distribution of heavy goods in the West. Address "BOX 103,"

Peoria, Ill

#### Wanted.

CAST AND WROUGHT TURNINGS.

Address, stating lowest price, point of delivery, umber of tons, &c.,

SITES & GILL 222 and 224 So. Third Street, Philadelphia, Pa

## Wanted.

A young man (one corresponding in German preferred) with a thorough knowledge of the Wire, Wire-Rod and Hoop trade of the U.S. A

good opening to the right party. Address " A. W,"

Office of The Iron Age, 83 Reade St., New York.

## WANTED, A SITUATION.

An Eastern American Iron Molder, foreman of a foundry in Fenneyivania, desires the foreman-ship of another foundry. Batisfactory reasons given; will refer to manyer of company for whom he is foreman; also give first-class Eastern references if desired. Thirteen years on light and heavy work, part of time foreman. Address "FOUNDRY FOREMAN—26"

Office of The Iron Age, 82 Reads st., New York

Office of The Iron Age, 83 Reade st., New York,

W ANTED.—a situation as manager or traveling salesman in Hardware, metals, House furnishings, Cutlery or Lamp Goods, by an energetic, reliable man, with 12 years experience, Last 5 years have acted as manager for large as to ability, &c. Would prefer an engagement the United States. Bt. Thomas, Ont., Canada.

## Trade Report.

#### BRITISH IRON AND METAL MARKETS.

[Special Cable Dispatch to The Iron Age.] LONDON, WEDNESDAY, Feb. 20, 1884. Scotch Pig.—The market is a little veaker. We quote makers' brands as

follows: Coltness, alongside, Glasgow. Langloan, "Gartsherrie, "Gar .... 54/6 Summerlee, ......58/6 Carnbroe, Glengarnock, "
Eclinton, "
Dalmellington, "
Shotts, " . ..... 47/ Cleveland Pig.-The market is irregular.

We quote as follows, f.o.b. shipping ports: 

Hematites are quoted 47/6 @ 48/ for mixed lots, Nos. 1, 2 and 3, equal parts, f.o.b. shipping ports. Manufactured Iron - Continues irreg-

ular. We quote at works: Staff. Ord. Marked Bars... 7 10 0 @ ...

" Medium " ... 6 5 0 @ 6

Hoops, 20 W. G. and over.
" Common Best... Common Best ... 7 0 0 @ 7 5 ... Medium ... 8 5 0 @ 6 15 ... Sheets, 20 W. G. and under. 90 W. G. and under.
Ordinary Best. . . . . 8 15 0 @ 9 5 0
Common. . . . . 8 0 0 @ 8 5 0
Bars. . . . . . 5 2 6 @ 5 5 0 Welsh Bars...

Steel Rails.—The market is quiet and unchanged. We quote: Ordinary Sections, £4. 15/@ £5, f.o.b. shipping ports. Old Rails—Are a little firmer. We

quote Old D. H.'s, £3. 7/6 @ £3. 10/, c.i.f. Scrap.—The market is a little firmer. We are reported sales of 1000 tons for prompt delivery San Francisco. We quote Heavy

Wrought, £2. 10/ @ £2. 12/6, c.i.f. New York; Bessemer Crop Ends, run of the mill, are quoted 50/@ 51/6, f.o.b. shipping ports. Copper.—The market is irregular. Best Selected is quoted £62. 10/@ £63, and Chili Bars, £55. 10/@ £56.

Tin-Is steady. We quote Straits Ingots, spot, £82. 10/@£83. 5/, and futures £83. 5/

Tin Plates -Are irregular. We quote : Spelter.—The market is quiet. We quote Ordinary, at shipping ports, £14. 10/@

Lead-Is a little weaker. We quote Common English Pig, £11. 15/@ £12.

Freights.—Steam from Glasgow to New York, 4/6@5/; Liverpool to New York, 4/; Liverpool to Philadelphia, 5/ @ 6/6, and London to New York, 7/6 @ 9/6.

### TRADE AND FINANCE.

Office of The Iron Age, Wednesday Evening, Feb. 20, 1884,

Both in trade and finance the week has een spiritless, and events are without special significance. In no small degree the lack of animation is due to execrable weather, supplemented by disastrous floods in the West. Happily, the waters are fast receding, and already advices from Pittsburgh and other important manufacturing points are to the effect that there will be an immediate resumption of operations in the iron mills, glass factories and coal mines. Speculation on all sides has received a decided quietus, of which there are indications in the lessened volume of business and lower prices. The suspension of the well-known stock-jobbing firm of McGinnis Bros. & Fearing, who were deficient \$97,000 in their indebtedness to the Oregon and Transcontinental Company, also of John L. Savage on the Petroleum Exchange, were consequences of the changed condition of the market. On Monday, for the first time in a year, the de-oil certificates declined to below \$1 \$\text{\$\text{\$\text{\$\general}\$}}\$ barrel. Bradstreet's reports a smaller number of failures last week than the preceding week, while R. G. Dun & Co. report an increase, particularly in the West and on the Pacific Coast, also in Canada. Wheat, corn and provisions are all lower and irregular, attributable to a relaxation of interest on the part of prominent bull operators, and to realizing generally. In May pork and lard there was a heavy break. On the other hand, trade in flour has improved, but the gain is slow, and the price of cotton has advanced. In regard to the export demand, there is no change for the better. Despite these rather somber features, the clearing-house returns for the week from 24 leading cities show a decrease of nearly 6 % in the volume of business, compared with the corresponding week last year, while in New York there was an increase of

The market for sterling exchange was stronger to-day, and the posted rates were advanced to \$4.87 @ \$4.90%, and actual rates for demand bills are 1/4 above the gold exporting point; but there is less apprehension concerning the effect of specie shipments. Specie would undoubtedly have gone out to-day, had there been a first-class steamer on the eve of departure. We unsteamer on the eve of departure. We understand that the Clearing-House authorities

have under advisement a proposition from the Assistant Treasurer of the United States with reference to the Government paying its balances in silver, in a certain contingency. Existing rules, which prohibit the receipt of silver dollars on deposit except under special contract, cannot be changed without 30 days' notice, which has not yet been given. Thus the question respecting a change of the standard of value is directly presented, and, in consideration of the momentous interests at stake, it may be better to invite immediate action rather than delay until the situation is aggravated by confor many years prominent in the Hardware trade as the head of one of the largest jobbing

tinued silver accumulations. On the Stock Exchange, during the week under review, the market has generally ruled strong, having in a measure recovered from the previous decline. The movement in Rock Island was stimulated by the supposed movements of Vanderbilt to obtain Central. On Saturday Manhattan Railway and Pullman Palace Car were special features, the former advancing 3%, while the latter declined heavily on a report that new stock would be issued. Delaware, Lackawanna & Bessemer Pig-Is irregular, W. C. of 14 % award by arbitrators in the Trunk Western also advanced on the announcement Line pool. On Monday the suspension of McGinnis Bros. & Fearing depressed the market, On Tuesday the market closed strong, which was continued to-day, but a slight reaction ensued in consequence of a further advance in sterling exchange; prices of some of the leading stocks closing as follows: Jersey Central, 891/4; Western Union, 76%; Reading, 58%; Canadian Pacific, 56%; Northwestern, 12114, and Union Pacific,

United States bonds were firm, as

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return for the week shows a decrease of \$1,083,600 in surplus reserve, which now stands at \$20,010,800, against \$3,674,825 at the same time last year, and \$1,072,225 at the corresponding date in 1881. The loans show a gain this week of \$3,975, 100, from which it may be inferred that money of late is finding more profitable employment. The present expansion for the moment receives little attention, owing to the extraordinary increase of reserve, but will excite more special remark in the spring, when the wants of the commercial community are on a larger scale, and when the annual settlements call for larger amounts in knew him intimately, were manifested also the interior. in his later business career, is shown in the

The imports of merchandise at this port during the past week were of good propor. tions, the total being \$8,630,982. While the receipts of general merchandise were rather light, there was an unusually heavy movement of dry goods, the imports amounting to \$3,735,216. Since January 1 the imports aggregate \$58,705,375, compared with \$63,-798,486 for the corresponding period of 1883. The importations of specie for the week amounted to \$99,782, mostly in silver, making a total of \$822,000 since January 1, and the exports of specie amounted to \$278,504, making a total of \$2,272,777 since January I, against \$1,816,000 for the same time in 1883. The exports of domestic produce from this port during the past week were below the usual average, their value being \$6,394, 219, against \$6,963,600 for the same week last year. Since January I the exports aggregate \$43,240,885, compared with \$49,-168,623 for the corresponding period of

## GENERAL HARDWARE.

The general features of the trade have not materially changed, business continuing in volume up to the average, but at narrow margins. In many lines of goods a fairly satisfactory trade is doing, and jobbers and manufacturers speak cheerfully of the condition of business and prospects for the season. Collections are good and prices steady.

Our r will be interested in the movement which has been made among the Hardware trade in this city, through the Hardware Board of Trade, for the relief of the sufferers by the

OHIO FLOODS.

The fund thus raised, amounting to \$1185, all of which is paid in, is being distributed in such localities as are in need of help, through the "Advisory Committee" which was appointed by Mayor Edson, of this city, on the 14th inst.

If others, merchants or manufacturers, desire to add their contributions to this fund, which not only expresses sympathy with the sufferers, but renders them greatly needed assistance in the pressure of a great calamity, their remittances may be sent to James H. Goldey, actuary of the Hardware Board of Trade, 4 and 6 Warren street, New York. We should be glad to be able to report in our next issue a substantial addition to this already creditable amount. The subscriptions received up to to-day are as follows:

Caton Cole a -	
Saton, Cole & Bumban	
Eaton, Cole & Burnham Co	
David Tirrey WID MIR CO	#100.
Russell & Erwin Mfg Co	100.0
David Williams.  argent & Co.	100,0
Argent & Co. Vallace & Sons	100.0
lebusch & Fillow Me	400,0
ermann Polyer Mig Co	50.0
Fallace & Sons. Februach & Hilger Mfg Co. ermann Boker & Co. urrie & McCarty L. Mctt Iron Works	50.0
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Tice & Cook Cook	
Nah & Frank	50.00
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uce & Cook. Nab & Harian Mig Co. ume & Atwood Mig Co. aterbury Brass Co.	80,00
aterbury Brass Co	60.00
	50,00

Stanley Rule and Level Co.
John F. Moore's Sons.
Borden & Lovell
Maitby, Curtis & Co.
Underbill, Clinch & Co.
D. H. Wilson & Co.
Henry Huber & Co.
Tennis & Wilson
Tuttle & Bailey Mfg Co. RALPH W. BOOTH. The announcement of the death of Ralph W. Booth on the 14th inst., at his home in this city, recalled the career of one who was

Having attained a thorough knewledge of the business, after spending some time in this city he went, in 1844, to Cincinnati, where he was first in the employ of Clark & Groesbeck, for whom he came to this market as buyer, soon, however, being taken into the firm, which then became Clark & Booth. After a short time Mr. Booth became the head of the concern, which then, and for many years, was known as R. W. Booth & Co. Mr. Booth is thus entitled to the distinction of being one of the pioneer Hardware men of the West, his name, with a few others, occurring to those whose business recollections go back 30 or 40 years, as leaders in the Western jobbing trade. The business prominence of Cincinnati during the years of Mr. Booth's activity there justified his sagacity in choosing that city as the field of his efforts, and his foresight is shown in the fact, which is mentioned to us, that the brick building he erected on the corner of Walnut and Pearl streets was the first five-story building in Cincinnati. But we need not recall the successful career of his firm until, in 1873, he suffered reverses and retired from the business. During that period it was that he was chosen president of the Western Hardware Association—a fact which illustrates the position he held before the trade and the confidence with which he was regarded. In 1875 he accepted the position of treasurer of the Consolidated Fruit Jar Company, in this city, at 49 Warren street, and in 1877 he was elected its president, a position which he filled until a year ago, when his failing health compelled his retirement from active life. That the personal qualities and business ability which characterized Mr. Booth during the many years of his connection with the Hardware trade, and commanded the success he attained and the high esteem of those who

houses of the West. Mr. Booth was born in

New Britain, Conn., in 1818, and when 16

years of age he went to Hartford, where he

became a clerk in a large Hardware house.

following minute, which was adopted on the 19th inst. by the Board of Trustees of the Consolidated Fruit Jar Company: Consolidated Fruit Jar Company:

Whereas, We have learned with sincere sorrow that his lingering illness has terminated in the decease of Ralph W. Booth, our late president.

Resolved, That by the death of Ralph W. Booth, we have lost a highly-valued friend and associate in this Board of Trustees.

That during his administration of the

and associate in this Board of Trustees.

That during his administration of the affairs of this company, as trustee, treasurer and president, extending over the trying years of 1875 to 1883, his mature judgment, financial ability, tireless application to duty and unawerving integrity were proper. ment, financial ability, tireless application to duty and unswerving integrity were prominent among the many traits of his character, and largely contributed to the prosperity of this company.

That the management of the company's factories required in its president the rare

That the management of the company's factories required in its president the rare combinations of firm justice, kind courtesy and manly consideration, as essential to a successful rule over men, and our late president has won from the numerous employees their wide respect, kindly regards and grateful memories of him.

their wide respect, kindly regards and grateful memories of him.

We tender our heartfelt sympathies to the family of Ralph W. Booth, and unite with them in the sorrows that cause our

mourning.

That this memento be suitably engrossed and bound, and, when signed by the officers of the company, presented to the family of

GEORGE V. POMEROY.

We are called upon also to record the death during the week of George V. Pomeroy, who, while for a number of years out of the Hardware business in this city, and hence not widely known by the younger members of the trade, was at one time prominent as a merchant. He is deserving of special mention in these columns, apart from his personal qualities and long business career, from the fact that he was, if not the first, certainly among the first, of the domestic Hardware commission merchants in this city.

Mr. Pomeroy was born in Wallingford, Conn., in April, 1807, and was consequently nearly 77 years of age at his death. In 1828 he went into the commission Hardware business at 5 Cedar street, in this city, under the firm name of G. V. Pomeroy & Co., soon after moving to 81 Pine street. About the year 1830 the firm was G. V. Pomeroy & Wells, successively on Pearl and Water streets, when the copartnership became Atwater & Pomeroy, who to their line of domestic Hardware added Stoves, doing a successful business, and large for those days. After this Mr. Pomeroy was alone for some time, but about the year 1845 he became a member of the firm of Gascoine & Pomeroy, who did an extensive Hardware business at the corner of Gold and Platt streets. After this, early in the fifties, he went to Cincinnati as a member of the house of Young & Pomeroy, jobbers in Hardware, which was his last connection with the trade. He subsequently was engaged in the dry-goods com-

#### Special Notices.

#### RECENT BOOKS.

Turnbull.—Treatise on the Compound Engine. - By John Turnbull, Jr. Revised, with additions, by Prof. S. W. Robinson, C. E.; illustrated with diagrams and tables, 192 pages, 18mo, boards. . . \$0.50

This little volume is divided into two parts.

The first part treats only of the Woolf compound engine, in which there is no receiver and where the high and low pressure cylinders are in immediate steam connection. The second part has been added to make the treatment more general and complete, and to include the intermediate receiver, clear-ance and cushion. Both the analytical and graphical methods have been employed, and it is claimed that by the diagrams presented any engine of the type discussed can be cor-

FOR SALE BY

### DAVID WILLIAMS,

83 Reade Street, New York

#### For Sale.

One 8-in. x 10 in. Vertical Engine One 8-in. x 12 in. Horizontal One join, x 6-ft. Vertical Boiler.
One join, x 6-ft. Vertical Boiler.
One join, x 7-ft.
Two join, x 16-ft. Horizontal Tubular Boilers.
One fool, x 16-ft. By W. EDVLEY 6. (2)

D. X 16-ft
CHARLER W. ERVIEN & CO.,
420 Ireland Street, Philadelphia, Pa.

#### WANTED.

A position as Salesman, by one who has had several years' experience in the Hardware Business. Would be pleased to communicate with any one desiring a Salesman, either in New York City or elsewhere. Address. Office of The trun Age, 83 Reade St., New York.

#### Wanted.

A SECOND HAND GATES NO. 3 CRUSHER, warranted in good condition.

State lowest price and where it may be seen. "CRUSHER,"

Office of The Iron Age, 83 Reade St., New York.

#### Wanted.

A Salesman in an Iron House. One who is capable of handling Pig Iron and has trade in Pennsylvania and New York. " B. & R.,"

Address Office of The Iron Age, 220 S. 4th St., Philadelphia.

#### Wanted-Partner,

IN THE GENERAL MACHINERY BUSINESS. To a man with capital a fine opportunity is offered in a house doing a good business and of established reputation. For particulars, address

"MACHINERY." Office of The Iron Age, 83 Reade st., New York.

#### Wanted.

A man to handle Engines and Boilers in New York City for a Philadelphia Manufacturer.

"BOILERS."

Lock Box 2161, Philadelphia P. O.

## Wanted.

A 20 or 25 Horse-Power Portable Engine and Boiler, warranted in good working condition. State lowest price, make, when built, how long in use, for what purpose used, and where it may be "ENGINES,"

Office of The Iron Age, 8: Reade st., New York

HOOK - KEEPER. A good Penman and a rapid and accurate Accountant wants a position in the Hardware Business. Ten years experence, Address "BOOKKEEPER," Office of The Iron Age, 83 Heade St., New York,

#### HARDWARE.

For Sale.—A clean stock of Hardware, in one of the most thriving towns in New York, and a goo paying business; stock of \$13,000, but can reduct to suit purchaser. Reasons for selling out, not connected with the business.

Address

B. C.,

Office of The Iron Age, 83 Reade St., New York

#### Wanted.

To communicate with some Eastern parties who are desirous of establishing an agency for their goods in Chicago, by a gentleman of business experience. Hardware preferred.

Audress "HARDWARE,"

481 Wabash Ave., Chicago, Ill,

#### Estimates Furnished

and contracts taken for power shears, power punches, steam hammers, steam riveters, boiler plate planers, and heavy punches made at reason able figures. Work guaranteed.

B. GRAVES LOUDEN.

ed St. and Washington Ave., Philadelphia. WILL OFFER below market rates the following :

NAILS LOCKS.

SCREWS. AND STRAP AND T HINGES.

A. W. WHEELER,

141 Lake Street, Chicago, Ill. ITUATION WANTED—By Hardware Salesman of 10 years' experience and acquaintance with jobbing trade throughout the West, South and Northwest. Best of references.

Address
"G. E. F.,"
Office of The Iron Age, 83 Reade St., New York. FOR SALE.—To party with \$20,000 to \$25,000 cash capital, a good paying Hardware Business in Colorado. Good reason given for selling.

"BOX 2634,"
Denver, Col.

#### Wanted.

From 2 to 4 miles 16-lb, Light T Rails, second-hand Address R. BALLAUF & CU., Jefferson, Texas. Jefferson, Texas.

YOUNG MAN who has a thorough knowledge of the German laneuage, capable of taking charge set of books, and has had by years' experience as ling Agent for an Iron Man Hacturing firm, desires osition in the Spring in a Western Hardware firm, it of references given. Address "48," Office of The Iron Age, 83 Reade St., New York;

W ANTED A gentleman with knowledge of me-chanics, familiar with machinery, and with ex-ecutive ability, to take charge of the office of a manufacturing company in Boston. Address, with reference, CLARKE, F. O. Box 572, New York City,

#### Special Notices.

#### For Sale or Exchange.

A party owning a complete Plate and Sheet Mill as per following list, will sell the whole or part of it for cash and long-time payments, or will exchange for Real Estate desirably located in any of the following cities: New York, Chicago, St Louis or St. Paul.

Louis or St. Paul.
Train of Lauth's 24-in, 3-high Rolls.
Train of 2-high 22-in. Plate and Sheet Rolls and Duplicate Rolls.
Train of 20-in. Soft Rolls and Duplicate Rolls.
Compound 18-in. Muck Train and Duplicate Rolls.
Large Engine, 32 x 42, horizontal, 20-ton fly, doubly-braced, wheel 12 in. face.
Large Roll Turning Lathe for Turning-up Rolls.
Large Roll Turning Lathe for Turning-up Rolls.
Large Pump.

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Furnace Plates for 8 furnaces, including Annealing and Pair Furnace.
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in the New York office of a manufacturing company; a first-class man of good address and experience, as inside and outside salesman. One familiar with the Machinery and Hardware trades preferred. Address, stating age, experience, reterences and compensation expected, "MACHINERY," Box 34, Office of The Iron Age, 83 Reade St., New York,

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# MACHINERY.

			_				
One	Engine	Lathe, 20	ft. b	ed, 42	in, sw	ring.	New.
One	65	18	9.5	3	5 **		0.6
One	0.0	38		31	9 11		0.0
One	0.5	16		30	9 61		0.6
One	6.0	14	6.6	36	61		0.0
One	86	12		30	**	Sec'	d-hand.
One	5.6	12	0.0	27	50		New.
One	0.0	10	4.6	87	0.0		0.0
One	0.0	12	0.6	2			6.6
One	9.5	10	16	23	18		4+
One	60	8	6.0	23			0.0
One	6.5	10	0.6	30			0.0
One	0.0	10	6.4	10	. 0.		0.6
One	9.0	8	69	x 8			+6
Four	0.0	6	65	16	0.6		6.8
Two	6.0	6	0.0	10			0.0
One	0.6	5	5.6	7.1			48
One l	ron Pla	ner, plan	e:81		R . 30 X	30 B	New.
One	61	nies, pitti		66		26 in	
One	4.6	6.5	4	0.4		22 ID	
One	6.6	1.0	12	6.6		32 in	
One	6.6	4.6	4	66		36 in	
One	0.6	6.6	9	0.0		27 in	
One	6.6	6.6	8	6.6		30 in	
One	0.0	0.0	7	6.6		30 in.	
Two	6.6	0.0	6	+ 9		28 in.	
Two	6.0	6.6		6.0		18 in	
	Termit De	ck geare	d Stoll	f.food			New.
One	pr t m	or Reme	u isea	66	30 in	4.5	5.6
One	0.0	0.0		6.5	26 in.		0.6
One	64	6.0		8.0	22 in		6 0
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Two	onabini	Machin	10	50	TONO.	0.0	
One		0.0	1.0			80	
		44	85		St.	acond	hand.
One		0.6	13	6.0	69		C ADDRESS (A)
One							

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2 Engline Lathe, 20 in. swing, 3 ft. bed. 2d-hand.

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2 Engline Lathe, 10 in. swing, 10 ft. bed. New.

2 Engline Lathe, 13 in. swing, 21 ft. bed. 2d-hand.

2 Engline Lathe, 13 in. swing, 21 ft. bed. 2d-hand.

2 Engline Lathe, 13 in. swing, 21 ft. bed. 2d-hand.

2 Engline Lathe, 13 in. swing, 20 ft. bed. 2d-hand.

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2 Engline Lathe, 13 in. swing, 20 ft. bed. New.

2 Engline Lathe, 13 in. swing, 20 ft. bed. New.

2 Engline Lathe, 13 in. swing, 20 ft. bed. New.

2 Engline Lathe, 14 in. swing, 20 ft. bed. New.

2 Engline Lathe, 14 in. swing, 20 ft. bed. New.

2 Engline Lathe, 14 in. swing, 20 ft. bed. New.

2 Engline Lathe, 15 in. swing, 20 ft. bed. New.

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4 Engline Lathe, 15 in. swing, 20 ft. bed. New.

4 Engline Lathe, 20 in. swing, 20 ft. bed. New.

4 Engline Lathe, 20 in. swing, 20 ft. bed. New.

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Engines and Boilers, Cheap. Needing the space which they occupy, will selle following goods very low and on favorable

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1 each, Engine Lathe, 18 in. x 6, 8, 10 and 11 ft.
1 each, Engine Lathe, 18 in. x 6, 8, 10 and 11 ft.
1 each, Engine Lathe, 18 in. x 6, 8, 10 and 10 ft.
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" 50 In. x 50 In. x 17 ft.
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	One 12 in. "	18	12-ln.	66	o prigar	04	
	O e 8-in.	6 1	ro-in.	0.0	66	0.6	Ride
	Two 516-in. "	6.0	7-in.	4.6	+9	44	cut off
	Operain. "	0.0	16 in.		Hutchinso	n & Ale	XBDde
	One 12-lp. "	0.0	Is-in.		Supplee 8	team E	ag. Co.
3		6	(4-ln.	4.6	Diamond	Drill Co	age Co.
	One 6-in. "	68	to in.	6.0	D rominoria	15	
)	One tolg-in."	61	36-1n.	0.0	Horizonta	I Engir	Leb .
3	One 16-in. "	0.0	32-ID.	+6	18	ti Lings	40.1
,	One to H. P. P.			ngine	and Boile	er on W	heels.
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	One 25 HP. L	DCO.	motive	a Boi	ler.		
	One 80 HP. H	orl	contal	Tub	ular Rotler		
	One 25 H. P.		00		16 66		
	One 45 HP.		+8	4	10 16		
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	One 36 in. by 3	24	Plain	Cvll	nder Rolle	in.	
	One 16 in. Upr	igh	t Deill	Pr	entice	4.4	
- 1	One 25 In.	'D.	01	Ne	w Haven	Wen Co	
	One 38 in.	la	6.6	244	o do	and of	
. 1	One 12 in. Cras	ale 1	Planer	No.	w Vork St	eam En	e Co
	One Large Hy	ira	III IO P	TO GE	to in Ram	COURT TOD	B. CU.
	One No. 3 Seco	nd.	Hand	Roor	Blower		
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"Automatic" Gas Producer.

(NEW PATENT.)

FOR FIRING STEAM BOILERS AND EVERY DESCRIPTION OF FURNACE.

The undersigned is open to receive offers for the manufacturing rights and sole agency for this valuable invention in the United States.

A. WILSON.

Tangye's Steel Works,

Birmingham, England

#### A CHICAGO FIRM

doing a large wholesale business throughout the Northwest want to correspond with some reli able manufacturers of Merchant Iron, Steel, Nails, Railroad and Builders' Supplies, &c., not already represented at Chicago, with a view to the exclu- Bars, £55. 10/ @ £56. sive handling of their product in the Northwestern

Address Y. Z. & CO., Office of The Iron Age, 36 & 38 Clark St., Chicago, Ill

## E. BISSELL & CO..

## Wholesale Hardware Auctioneers,

83 Chambers and 65 Reads Sts., N. Y.

Sales held weekly for the trade. Consignments solicited. We refer to the leading manufacturers and importers.

[FOUNDED 1848 [INCORPORATED 1884.] PATTERSON BROTHERS,

The copartnership beretofore existing between
H. A. PATTERSON. E. C. PATTERSON and M. C.
KELLOGO, under the firm name of PATTERSO,
BROTHERS, expires by limitation, and is dissolved this day. e of PATTERSON

BROTHERS, expires by imitation, and is dissolved this day.

The successor of the said firm is PATTERSON BROTHERS, a corporation duly formed under the laws of the State of New York, which corporation will continue the Hardware and Metal business at the old stand, 27 Fark Row, New York.

All outstanding accounts and contracts of the firm are assumed, and will be settled by the said corporation.

#### For Rent.

A well-equipped Rolling Mill, with a secured custom, on favorable terms.

Address

LOCK BOX No. 12, Philadelphia Post Office.

#### Wanted.

A Partner in an establi hed wholesale Iron, Steel of from \$12,000 to \$15,000 required. The place is one of the best points for distribution of heavy goods in the West. Address "BOX 103,"

Peoria, Ill

#### Wanted.

CAST AND WROUGHT TURNINGS,

Address, stating lowest price, point of delivery, number of tons, &c.,
SITES & GILL,

222 and 224 So. Third Street, Philadelphia, Pa.

#### Wanted.

Wire, Wire-Rod and Hoop trade of the U.S. A good opening to the right party. "A. W." Address

Office of The Iron Age, 83 Reade St., New York.

#### WANTED, A SITUATION.

An Eastern American Iron Molder, foreman of a foundry in Pennsylvania, desires the foreman ship of another foundry. Satisfactory reasons given: will refer to manager of company for whom he is foreman; also give first-class Eastern references if desired. Thirteen years on light and heavy work, part of time foreman. Address

"FOUNDRY FOREMAN—26"

Office of The Iron Age. 8: Bende st. New York

Office of The Iron Age, 83 Reade st., New York, WANTED.—A situation as manager or travel-

Wanted—a situation as manager or traveling salesman in Hardware, hetals, House Furnishings, Cutlery or Lamp Goods, by an energetic, reliable man, with 12 years! experience, Last 5 years have acted as manager for large wholesale house in Canada. Best of references as to ability. &c. Would prefer an engagement with manufacturer to canvas wholesale trade in the United States.

\*\*ROY 588.5\*\* "BOX 585," homas, Ont., Canada. St. Thoma

# ENGINES AND BOILERS. Trade Report

## BRITISH IRON AND METAL

MARKETS [Special Cable Dispatch to The Iron Age.]

LONDON, WEDNESDAY, Feb. 20, 1884. We quote makers' brands as follows : Coltness, alongside, Glasgow. Gartsherrie, Summerlee, Carnbroe, "Glengarnock, "

Lighterage from Ardrossan to Glasgow is 1/ ? Cleveland Pig.-The market is irregular. We quote as follows, f.o.b. shipping ports: 

at Leith.

Dalmellington, "

Shotts.

lots, Nos. 1, 2 and 3, equal parts, f.o.b. McGinnis Bros. & Fearing depressed the shipping ports. Manufactured Iron - Continues irreg-

Bessemer Pig-Is irregular. W. C.

ular. We quote at works: £ s, d, £ s, 6 7 10 0 @ ...... 6 5 0 @ 6 15 6 0 0 @ 6 5 Staff. Ord. Marked Bars... Medium "
Common " Hoops, 20 W. G. and over.

7 0 0 @ 7 5 0 6 5 0 @ 6 15 0 6 10 0 @ ...... Medium .... Common. Sheets, 20 W. G. and under. Ordinary Best..... 8 15 0 @ 9 5 8 0 0 @ 8 5 5 2 6 @ 5 5 Steel Rails.-The market is quiet and

unchanged. We quote: Ordinary Sections, £4. 15/@ £5, f.o.b. shipping ports. Old Rails-Are a little firmer. We

quote Old D. H.'s, £3. 7/6 @ £3. 10/, c.i.f. New York.

Scrap.-The market is a little firmer. We are reported sales of 1000 tons for prompt delivery San Francisco. We quote Heavy Wrought, £2. 10/ @ £2. 12/6, c.i.f. New York; Bessemer Crop Ends, run of the mill, are quoted 50/@ 51/6, f.o.b. shipping ports.

Copper.—The market is irregular. Selected is quoted £62. 10/ @ £63, and Chili

Tin-Is steady. We quote Straits Ingots,

spot, £82. 10/@£83. 5/, and futures £83. 5/ @ £83. 15/ Tin Plates-Are irregular. We quote :

Spelter.-The market is quiet. We quote Ordinary, at shipping ports, £14. 10/ @

£14. 15 Lead-Is a little weaker. We quote Com-

mon English Pig, £11. 15/ @ £12. Freights .- Steam from Glasgow to New York, 4/6@5/; Liverpool to New York, 4/ Liverpool to Philadelphia, 5/ @ 6/6, and London to New York, 7/6 @ 9/6.

#### TRADE AND FINANCE.

Office of The Iron Age, Wednesday Evening, Feb. 20, 1864,

Both in trade and finance the week has been spiritless, and events are without special significance. In no small degree the lack of animation is due to execrable weather, supplemented by disastrous floods in the West. Happily, the waters are fast receding, and already advices from Pittsburgh and other important manufacturing points are to the effect that there will be an immediate resumption of operations in the iron mills, glass factories and coal mines. Speculation on all sides has received a decided quietus, of which there are indications in the lessened volume of business and lower prices. The suspension of the well-known stock-jobbing firm of McGinnis Bros. & and Heavy Hardware and Wood stock. A capital indebtedness to the Oregon and Transconti Fearing, who were deficient \$97,000 in their nental Company, also of John L. Savage on the Petroleum Exchange, were consequences of the changed condition of the market. On Monday, for the first time in a year, the price of crude-oil certificates declined to below \$1 P barrel. Bradstreet's reports a smaller number of failures last week than the preceding week, while R. G. Dun & Co. report an increase, particularly in the West and on the Pacific Coast, also in Canada. Wheat, corn and provisions are all lower and irregular, attributable to a relaxation of interest on the part of prominent bull operators, and to realizing generally, A young man (one corresponding in German In May pork and lard there was a heavy preferred) with a thorough knowledge of the break. On the other hand, trade in flour has improved, but the gain is slow, and the price of cotton has advanced. In regard to the export demand, there is no change for the better. Despite these rather somber features, the clearing-house returns for the week from 24 leading cities show a decrease of nearly 6 % in the volume of business, compared with the corresponding week last year. while in New York there was an increase of

> The market for sterling exchange was stronger to-day, and the posted rates were advanced to \$4.87 @ \$4.90 1/2, and actual rates for demand bills are 1/4 above the gold exporting point; but there is less apprehension concerning the effect of specie shipments. Specie would undoubtedly have gone out to-day, had there been a first-class steamer on the eve of departure. We understand that the Clearing-House authorities | Waterbury Brass

have under advisement a proposition from the Assistant Treasurer of the United States with reference to the Government paying its balances in silver, in a certain contingency. Existing rules, which prohibit the receipt of silver dollars on deposit except under special contract, cannot be changed without 30 days' notice, which has not yet been given. Thus the question respecting a change of the standard of value is directly Scotch Pig.-The market is a little presented, and, in consideration of the momentous interests at stake, it may be better to invite immediate action rather than delay until the situation is aggravated by continued silver accumulations

On the Stock Exchange, during the week under review, the market has generally ruled strong, having in a measure recovered from the previous decline. The movement in Rock Island was stimulated by the supposed movements of Vanderbilt to obtain Central. On Saturday Manhattan Railway and Pullman Palace Car were special features, the former advancing 3%, while the latter declined heavily on a report that new stock would be issued. Delaware, Lackawanna & Western also advanced on the announcement of 14 % award by arbitrators in the Trunk Hematites are quoted 47/6 @ 48/ for mixed Line pool. On Monday the suspension of market. On Tuesday the market closed strong, which was continued to-day, but a slight reaction ensued in consequence of a further advance in sterling exchange; prices of some of the leading stocks closing as follows: Jersey Central, 8914; Western Union, 76%; Reading, 581/2; Canadian Pacific, 561/4; Northwestern, 12114, and Union Pacific, 831/2.

United States bonds were firm, below:	as quote
Bi	id. Asked
U. S. 4168, 1891, registered	336 1131
U. S. 4198, 1891, coupon 114	116 1149
U. S. 4s, 1907, registered 123	374 124
	874 124
	034 -
U. S. Currency 6s, 1965	9 -
U. S. Currency 6s, 1896	9 -
U. S. Currency 6s, 1897 18	
U. S. Currency 6s, 1898	
U. S. Currency 68, 1899	

The bank return for the week shows a decrease of \$1,083,600 in surplus reserve, which now stands at \$20,010,800, against \$3,674,825 at the same time last year, and \$1,072,225 at the corresponding date in 1881. The loans show a gain this week of \$3,975. 100, from which it may be inferred that money of late is finding more profitable employment. The present expansion for the moment receives little attention, owing to the extraordinary increase of reserve, but will excite more special remark in the spring, when the wants of the commercial community are on a larger scale, and when the annual settlements call for larger amounts in the interior.

The imports of merchandise at this port during the past week were of good propor. tions, the total being \$8,630,982. While the receipts of general merchandise were rather light, there was an unusually heavy movement of dry goods, the imports amounting to \$3,735,216. Since January 1 the imports aggregate \$58,705,375, compared with \$63, 798,486 for the corresponding period of 1883. The importations of specie for the week amounted to \$99,782, mostly in silver, making a total of \$822,000 since January 1, and the exports of specie amounted to \$278,504, making a total of \$2,272,777 since January r, against \$1,816,000 for the same time in 1883. The exports of domestic produce from this port during the past week were below the usual average, their value being \$6,394, 219, against \$6,963,600 for the same week last year. Since January 1 the exports aggregate \$43,240,885, compared with \$49,-168,623 for the corresponding period of

## GENERAL HARDWARE.

The general features of the trade have not naterially changed, business continuing in volume up to the average, but at narrow margins. In many lines of goods a fairly satisfactory trade is doing, and jobbers and manufacturers speak cheerfully of the condition of business and prospects for the season. Collections are good and prices

Our readers will be interested in the movement which has been made among the Hardware trade in this city, through the Hardware Board of Trade, for the relief of the sufferers by the

OHIO FLOODS.

The fund thus raised, amounting to \$1185, all of which is paid in, is being distributed in such localities as are in need of help through the "Advisory Committee" which was appointed by Mayor Edson, of this city, on the 14th inst.

If others, merchants or manufacturers desire to add their contributions to this fund. which not only expresses sympathy with the sufferers, but renders them greatly needed assistance in the pressure of a great calamity, their remittances may be sent to James H. Goldey, actuary of the Hardware Board of Trade, 4 and 6 Warren street, New York. We should be glad to be able to report in our next issue a substantial addition to this already creditable amount. The subscriptions

	received up to to-day are as follows:
	Eaton, Cole & Burnham Co\$10
	Russell & Erwin Mfg Co 10
	David Williams 10
	Sargent & Co 10
Į	Wallace & Sons 5
1	Wiebusch & Hilger Mfg Co 5
ı	Hermann Boker & Co 5
١	Durrie & McCarty 5
ł	J. L. Mott Iron Works 5
J	Schoverling, Daly & Gales
١	Bruce & Cook 50
1	McNab & Harlan Mfg Co
1	Plume & Atwood Mfg Co
	Waterburg Danie Co

Louderback, Gilbert & Co. Stanley Rule and Level Co. John P. Moore's Sons. Borden & Lovell Maltby, Curtis & Co. Underbill, Clinch & Co. Tuttle & Bailey Mfg Co. .\$1,185,00

RALPH W. BOOTH

The announcement of the death of Ralph W. Booth on the 14th inst., at his home in this city, recalled the career of one who was for many years prominent in the Hardware trade as the head of one of the largest jobbing houses of the West. Mr. Booth was born in New Britain, Conn., in 1818, and when 16 years of age he went to Hartford, where he came a clerk in a large Hardware house, Having attained a thorough knowledge of the business, after spending some time in this city he went, in 1844, to Cincinnati, where he was first in the employ of Clark & Groesbeck, for whom he came to this market as buyer, soon, however, being taken into the firm, which then became Clark & Booth. After a short time Mr. Booth became the head of the concern, which then, and for many years, was known as R. W. Booth & Co. Mr. Booth is thus entitled to the distinction of being one of the pioneer Hardware men of the West, his name, with a few others, occurring to those whose business recollections go back 30 or 40 years, as leaders in the Western jobbing trade. The business prominence of Cincinnati during the years of Mr. Booth's activity there justified his sagacity in choosing that city as the field of his efforts, and his foresight is shown in the fact, which is mentioned to us, that the brick building he erected on the corner of Walnut and Pearl streets was the first five-story building in Cincinnati. But we need not recall the successful career of his firm until, in 1873, he suffered reverses and retired from the business. During that period it was that he was chosen president of the Western Hardware Association-a fact which illustrates the position be held before the trade and the confidence with which he was regarded. In 1875 he accepted the position of treasurer of the Consolidated Fruit Jar Company, in this city, at 40 Warren street, and in 1877 he was elected its president, a position which he filled until a year ago, when his failing health compelled his retirement from active life. That the personal qualities and business ability which characterized Mr. Booth during the many years of his connection with the Hardwaie trade, and commanded the success he attained and the high esteem of those who knew him intimately, were manifested also in his later business career, is shown in the following minute, which was adopted on the 10th inst. by the Board of Trustees of the

Consolidated Fruit Jar Company: Whereas, We have learned with sincere sorrow that his lingering illness has ter-minated in the decease of Ralph W. Booth,

our late president.

Resolved, That by the death of Ralph W Booth, we have lost a highly-valued friend and associate in this Board of Trustees.

That during his administration of the

affairs of this company, as trustee, treasurer and president, extending over the trying years of 1875 to 1883, his mature judgment, financial ability, tireless application to duty and unswerving integrity were prominent among the many traits of his character, and largely contributed to the prosperity of this company.

of this company.

That the management of the company's factories required in its president the rare combinations of firm justice, kind courtesy and manly consideration, as essential to a successful rule over men, and our late president has won from the numerous employees their wide respect, kindly regards and grate-ful memories of him.

We tender our heartfelt sympathies to the family of Ralph W. Booth, and unite with them in the sorrows that cause our mourning.

That this memento be suitably engrossed and bound, and, when signed by the officers of the company, presented to the family of the deceased.

We are called upon also to record the death during the past week of George V. Pomeroy, who, while for a number of years out of the Hardware business in this city, and hence not widely known by the younger members of the trade, was at one time prominent as a merchant. He is deserving of special mention in these columns, apart from his personal qualities and long business career, from the fact that he was, if not the first, certainly among the first, of the domestic Hardware commission merchants in this city

Mr. Pomeroy was born in Wallingford, Conn., in April, 1807, and was consequently nearly 77 years of age at his death. In 1828 he went into the commission Hardware business at 5 Cedar street, in this city, under the firm name of G. V. Pomeroy & Co., soon after moving to 81 Pine street. About the year 1830 the firm was G. V. Pomeroy & Wells, successively on Pearl and Water streets, when the copartnership became Atwater & Pomeroy, who to their line of domestic Hardware added Stoves, doing a successful business, and large for those days. After this Mr. Pomeroy was alone for some time, but about the year 1845 he became a member of the firm of Gascoine & Pomeroy, who did an extensive Hardware business at the corner of Gold and Platt streets. After this, early in the fifties, he went to Cincinnati as a member of the house of Young & Pomeroy, jobbers in Hardware, which was his last connection with the trade. He sub-0.00 sequently was engaged in the dry-goods comued until the death of his sons, a few years

There are not many who recall Mr. Pomeroy's early career, but appreciative in full, as many of them are located in the tributes are paid to his ability and worth, inundated districts, and will lose two or three and the qualities which endeared him to his As a pioneer in the sale on commission of American Hardware, his career is tion, which was held in this city last Thurs connected with a branch of the Hardware day, only routine business was transacted business which has grown to extraordinary proportions, and in which he is entitled to the situation, which elicited the general ex-Pomeroy, No I Platt street, who was for many years associated with him in his toward making any change in prices, the bevarious enterprises, survives him.

#### SCREWS.

At present there is in Screws only a limited business, most of the manufacturers reporting that they are well occupied with orders, and unwilling to make concessions from their quotations. We hear of no new circulars, the situation remaining substantially as it was a week agc. We continue to quote Screws at from discount 70 per cent. to discount 75 per cent., at both of which figures sales are made.

The American Screw Company, referring to the views of a leading house, which we published in our review of the Screw market last week, take exception to the attempt, as they interpret it, to throw the blame of the present situation upon them, and they authorize us to say that they did not determine not to enter another combination until they had proposed an arbitration of all matters in controversy, being joined in this proposition by all the members except one of the committee appointed by the association to recommend a plan of action. They add that they were careful not to demand anything. and favored an appeal to arbitration as the most satisfactory solution of the difficulties in question.

The following is the full text of the circular of the Union Steel Screw Company, the prices quoted in which we gave last week

CLEVELAND, Ohio, February 11, 1884. GENTLEMEN: From this date, until further advices, we quote the following discounts for Wood Screws of our manufacture, which are first quality only : Flat Head Steel.... Round Head Steel. Flat Head Brass... Round Head Brass.

Terms cash. No prices guaranteed. All orders subject to our ruling prices at date of shipment. Orders for unusual proportions of any sizes will be executed at special prices, as may be agreed. Soliciting your favors, we are, yours respectfully,

Union STEEL SCREW COMPANY.

#### CORDAGE.

There has been another reduction in the price of Manila Rope, as shown in the following revised list, which is issued under date February 18th. It is subject to the usual discount to the trade of I cent per

pound ;	
Manila Rope.	
1¼ inch cir. and upward Cts. I	
134 Inch cir. and upward	1436
12 thread, or % inch diameter	15
6 & 9 thread, or ¼ and 5-16 inch diameter	1516
Hay Rope, 2, 8, 4 or 5 thread	1436
Bolt and Point Rope	16
Tarred Rope and Lath Yarn	14
Stave, Leather and Hop Twine	15
Sisal Rope.	
1¼ inch cir. and upward	936
12 thread, or % inch diameter	10
5 and 9 thread, or 14 and 5-16 inch diameter	1016
Hay Rope, 2, 3, 4 or 5 thread	912
Tarred Rope and Lath Yarn	979
Russia Hemp.	48
White Rope.	17
Tarred Rope and Ratline	11
Spun Yarn	1016
Bolt Rope	18
Bolt Rope	
line	15
Packing	16
American Hemp.	-
White Rope. Tarred Rope and Ratiine	18
Tarred Rone and Ratline	1234
Spun Yarn	12
Lath Yarn	1216
Dooking	1679
Packing	17
line	40
Cash and Dall Cand	16
Sash and Bell Cord25	10 80
Italian Hemp.	
Packing	90
Tarred Rope	16
Jute.	-
Rope and Packing	5
Oakum,	
Best Oakum	9
U. S. Navy	8
Navy	694
Discounts to Dealers.	
On 100 bales and over	. Ib

#### BARB WIRE.

The situation continues practically unchanged. A fair amount of orders is being booked, but business is not as active as manufacturers would like to see it. Nevertheless, there is a better feeling all round, and prospects are favorable for a much greater volume of trade as the season opens. A movement is on foot among manufacturers to establish an understanding by which fixed rates can be maintained in certain localities If the movement in favor of the organiza tion of a general syndicate results in complete success, however, there will be no ne d of this localized combination; but if the syndicate cannot be formed, the minor scheme will probably be put into operation. Prices are still quoted on a basis of 53/4 cents per pound at New York for large lots of Four-Point Galvanized Barb Wire, with 1/4 @ 1/4 cent additional for small quantities.

The demand continues active, especially for well known and favorite goods. Dealers | quotations : generally are very well satisfied with the manner in which they are able to make sales. Orders for export are also appearing a little more frequently than has been the case recently. The supply of Nails is apparently sufficient for the demands of the sea son, notwithstanding the idleness of so many factories. The Fall River Iron Works have shut down, pending a readjustment of wages, Ratchet Bed Keys.

NAILS.

mission business in this city, the firm being and now all the New England factories are G. V. Pomerov & Sons, in which he contin- closed. In Eastern Pennsylvania there are also labor difficulties, which may result in the stoppage of several factories. The Western Nail Works have not yet resumed operations Unionville, Conn., have issued the following weeks in repairing damages. At the monthly meeting of the Atlantic States Nail Associabut there was an interchange of views upon honorable place. His brother, Grove pression that the condition of trade was satlief being pretty decided that the manufacturers will do very well if they can keep prices steady at about present rates until the building season opens. We quote on the basis of \$2.50 to the trade, with \$2.50 as the rate for large lots, and \$2.65 and upward for small lots.

THE VAN WAGONER & WILLIAMS COMPANY, Hooks, &c., which they manufacture. It describes the new articles which they have put on the market, and the new finish which they have adopted for some of their Gem Hinges and other goods. They make a new style of Empire Spring Hinges for use on screen doors, which are manufactured with loose pin and so made that the pin cannot rise when the tension is on the spring. But special attention is called to the fact that, while the tension can be readily increased or removed, the Hinges are packed ready for se without the necessity of adjustment. These goods are finished in walnut bronze and are sold from the following list, which is subject to a discount of 60 per cent.:

8 in. Surface, Single Acting, No. 3, pr. doz. prs. \$3.00
4 " No. 4. " 5.00
3 " Mortise " No. 30. " " 3.50
One-half dozen pairs in a box. One-half gross pairs in a case.

In addition to the finish with which they have heretofore been making the Gem Spring Japanned, with Nickel, Brass or Copper to a discount of 50 per cent.: Hinges, they are now making them also Plated Tips, as indicated in the following list, which is subject to a discount of 30 per cent. :

Single	Actio

Length of

5 " .1 to 15 " " 6 " .1 to 15 " " 7 " .154 to 15 " " 8 " .154 to 24 " 10 " .1 to 25 " 12 " .2 to 3 "	66 1.73 67 2.22 68 3.25	1,5652,2 1,5662,7 1,5673,2 1,5684,5 1,5696,0
-	with Cop'r Brzd. Tipe	Japanned, with Bras Plated Tipe and Tubes
Length of Flances. For Doors. 3½ inch 3½ to 1½ inch 4 " 1 to 13½ " 1 to 23½ " 1 t	1,664 2.00 1,665 2.25 1,666 2.75 1,067 8.25 1,608 4.50 1,069 6.00	No. pair
Double .	Acting.	
	Japanned.	Japanned, with Nickel Plated Tips and Tubes.
7114 to 134 8114 to 214 10114 to 214	Per No. pair. 53.60 85.250 86. 3.50 87. 4.50 88. 6.50 89. 9.00 90. 12.00	1,583 \$3.60 1,584 4,00 1,585 4,50 1,586 5,50 1,587 6,50 1,588 9,00 1,589 12,00
*	Japanned. with Cop'r Brad. Tips	with Brass

12	6.6	2	to 8	" 1,	69015.0	00 1,790 15	.00
T	hey	have	also	com	menced	making	8
Gen	a S	creen	Door	Pull,	which	is manufa	ic.
ture	d o	f Wir	e, Wa	lnut l	Bronzed	, and is so	14
at \$	2 8 1	gross,	discou	int 55	per ce	nt.	

Their Gem Wire Coat and Hat Hook they are now making in Polished Brass in addition to the Walnut Bronzed and Nickel Plated, with which the trade are familiar. Their list for the three styles of finish is as follows, subject to a discount of 45 per cent.

Size.	Walnut	Nickel	Polishea
	Bronzed.	Plated.	Brass.
1 inch	50\$1.75 60\$2.00 70\$2.40	No. Pr. gr. 450. \$4.75 460. 5.00 470. 5.40 480. 6.00	750\$10.00 760 11.00 770 13.50

The catalogue also contains their Walnut Empire, Acme and American Spring Hinges, the Gem and Star Spiral Door Springs, and the Torry and Bee & Rod Door Springs and other goods. The discounts on the whole list are as follows, some of them being changed, as our readers will observe, from former

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Gem		0.0	6.6																								
	Door	Sprin	cres.	Ja	185	a	n	n	à	a	À	ŝ	é	300	â		à	â	m	i d	á						
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Show Case	e Spring	Hinge	es								
Gem Wire Milea' "	Coat an	d Hat	Hoo								
Domestic :	Blind Ad	inster			•	0 1		0 1			 
Domestic .	Dilinu Au	Juster		0 0		0 1	. 0	0	0	0	 þ

#### THE RIPLEY MANUFACTURING COMPANY,

discount sheet on the line of Light Hardware Tools and House-furnishing Ware which they

intendrecoure .		
Page. Catalogue No. !		Dis. per ce
10, Boot Jacks, Automatic 11, "Tourists' Folding		
8, Bung Starts		
6 and 7, Carpet Hammers, Nos. 7, Carpet Hammers, Magnetic.	200 a	nd 250
6 Cover Liftory Handled		
14, Hand Screws. 4, Lemon Squeezers, Porcelain I. 4, "Wood	ined	
7, Magnetic Tack Hammers 8 and 9, Mallets.		
8, Mouse Traps, Common Sense.		
12, Oil Pumps. 16, Police Clubs		
5, Potato Mashers 16, Roofing Copper Handles		
13, Saw Vises		
16, Soldering Copper Handles 16, Seat Sticks, hand-made		

They also make the Sunny Side Cottage 82 Beekman street, New York, have issued | Bird Houses, which are described as painted their price list for the current year for the in two colors, neat, useful and attractive; Spring Hinges, Door Springs, Coat and Hat size, 6 x 6 x 6. Price per dozen, \$3, subject to a trade discount of 25 per cent.

#### NEW GOODS.

The Eberhard Manufacturing Company, Cleveland, Ohio, have commenced making a line of Malleable Iron Screws and Adjustable Clamps from new patterns, extra strong. The thread is machine-cut and the Clamps are japanned, packed in paper boxes and recommended as equal to any in the market. They report that trade has greatly improved in the last two or three weeks and that orders have been for fair amounts, apparently for urgent wants.

Alcott & Smith, New Britain, Conn., for whom Messrs. Graham & Haines, of 113 Chambers street, New York, are agents, have issued a circular showing some of their Hardware specialties, a description of which is given in another part of this paper. Among these we mention the Perfect Coat and Hat Hook, made under Alcott's patent, which is sold from the following list, subject

No.					In.	Hook.	Per gr.
1.	Plain	Iron,	Japanne	ed		8	\$5.64
2.	66	0.6	. 66		000	834	6.86
11.	86	64	Copper	Bronzed		8	6.12
12.	0.6	8.5	16	46		834	6,96
4.	Figur	ed Ire	on, Amb	er Bronze	d.	312	8.52
I	pack	ed wi	th Screw	s, same fi	nisl	as Ho	ooks, add
36 €	cents t	o net	gross pr	100.			
No.				1	In.	Hook.	Per doz.
R	EN orașe	ad T	mon Kil	skel-Plate	d		

They also offer Piper's Improved Gentle men's Gem Carriage Wrench. This article is made of two sizes—No. 1, for ¾ and ¾ inch nuts; No. 2, for 3/8 and I inch nutsboth sizes being sold at \$10 per dozen, subject to a discount of 45 per cent.

Arnold's Patent Wagon and Carriage Jack is sold at \$27 per dozen for a 30-inch Jack, subject to a discount of 331/3 per cent.

The catalogue for 1884 of W. P. Kellogg, Troy, N. Y., for whom the Ross & Fuller Association, No. 97 Chambers street, are agents, has been issued and contains a number of new goods. Among these may be mentioned their Back-Grasp Curry Combs, made in a variety of styles, special attention being called to their Back-Grasp Horse-Shoe pattern, an article which they are now for the first time putting upon the market. This Comb, which has some of the features of the Horse Shoe pattern, is made with either open or closed back, and has an exceptionally satisfactory handle. Theouse of a list on these goods is dispensed with and net figures are quoted.

The following is the price list of the Attwell Burglar-Proof Sash Lock and Ventilator, which is manufactured by the Attwell Manufacturing Company, 162 Main street, Cincinnati, Ohio. Our readers will remember the illustrated description we gave of this article in a recent issue. On small orders 25 per cent. discount is allowed, lows:

Price Price per per dozen dozen No. 1. No. 2.	\$2 5 5 5 5 5 5 5 5 5 5 5 5 5 5 6 5 6 5 6		Price perdog.	1.00
Price I per dozen No. 1.	28.4.488 8.88888			
Length of Key.	222222 222222 222222 242222	ks.	Length of Key.	\$4.4 \$4.4 \$4.4 \$4.4 \$4.4 \$4.4 \$4.4 \$4.4
Shape of Key Head	00 00 00 00 00 00 00 00 00 00 00 00 00	Keys-Separate from Locks.	Shape of Key Head.	0 or 00 0 or 00 00
Panish.	Tucker Bronze. Nickel Plate. Real Bronze,	Keys-Sepan	Finish.	Tucker Bronze. Nickel Plate. Real Bronze.
Size.	5 5 5 5 5 5 5		Skyle B. f.	677 ::::
No. Style.	AE AE AE		For Locks, 8	200
No.	100. 150. 250. 300.		For L	A OF E

The Bucyrus Plow Company, of Bucyrus, a new model Steel Plow, to which they refer opening very fairly. important advantages over others. It is Hawley Iron Company, St. Louis, Mo., who porters are lewer, and energies described in their circular as New Model are manufacturers of Blacksmith Tools and age to sell their Iron previous to its deliv-

Double Shovel Plow with adjustable shovels, as well as a cheap Wood Beam Double Shovel of which appeared in their advertisement in The Iron Age of February 7, is one of their new articles which they are putting upon They make also a patent the market Vibrating Harrow, Potato Hiller and Digger, and various styles of Plows.

The advertisement which appears on another page of the Bissell

CARPET SWEEPERS for which T. W. Williams, 46 Murray street, is agent, deserves the attention of those desiring this line of goods. The Bissell Carpet Sweeper Company, Grand Rapids, Mich., who manufacture the well-known Sweepers which bear their name, lay special emphasis on the fact that their Sweeper is the only one on the market which has central bearings and self-adjusting brush, the advantage being that running on the rubber wheels in the center of the Sweeper, the brush has no end bearings, so that the bristles stand out over the end of the brush roller. Besides this, the end of the Sweeper is made thin and cut away 1/4 inch from the carpet, so that the bristles of the brush revolve up to and against the base-board, with no handle over the end to mar the furniture. It is thus, they point out, adapted to sweep close up to furniture and the sides of the room In addition to the ordinary method of emptying the sweepings at the top by opening the cover, they are now also making some numbers in which the pans open down-

17.00 19.50 22,00 In all the Drop Pan Sweepers the sweepings can be emptied from the top as well as from the bot-

ward as well. The following are the differ-

ent styles which are made and the present

#### NEW CATALOGUES.

The catalogue of the Champion Iron Fence Company, Kenton, Ohio, who are widely known as large manufacturers of Iron Fencing, exhibits very fully the different styles of goods that they make. Their Champion Fences, which are displayed in the first 30 pages of their pamphlet, are patented and made in a number of attractive patterns. Their All-Wrought-Iron Punched-Rail Fences occupy 20 more pages, after which is an unusually complete exhibit of Crestings and Finials. Then follow miscellaneous cast-iron goods, such as Brackets, Settees, Window-Guards, Stable Fixtures, &c., the list closing with a representation of their Ohio Champion Double-Acting Force

The catalogue for 1884 of the E. T. Lufkin Rule Manufacturing Company, 129 Scott street, Cleveland, Ohio, will be useful to those who desire to be informed with reference to Lumbermen's Rules, of which this house is, we believe, the oldest manufacturing concern in the country. They mention that they have recently com the manufacture of Log Calipers, which are extensively used in some localities. They also illustrate a new Head, which they make when desired, for Sorting Rules, which they mention is meeting with favor, especially on the short heavy Sorting Rules, with which much lumber has to be turned.

Pump, for which special claims are made.

The Chisholm Steel Shovel Works, Cleveland, Ohio, have issued a revised price list supplementary to their catalogue No. 5, giving the revised lists on the Shovels, Spades and Scoops which they manufacture. It covers a line of Solid Cast Steel Shovelspatent Plain Back, Back Strap and Socket; Solid Cast-Steel Spades-Socket, Ditching and Drain, and Chisholm's patent Plain Back; Steel Scoops, Eastern and Western pattern, with thick center, and extra light, and also discount of 331/3 per cent., 60 days. They mention that trade has been unusually good with them for the past six months, there being a specially brisk demand for a new additional hydraulic press for making the heavy thick center Scoops, for which there has been a large demand the past year for locomotive use and for handling coal, corn in the ear, &c.

The Tuthill Spring Company, 79 Dearborn trated catalogue of Wagon and Carriage Springs. It contains useful lists of leading patent Springs, Brewster, Timken, &c., as well as tables of the weight of Springs and their regular lengths, and of the sizes of gauge numbers used in designating Spring Steel. It also describes and illustrates the the manufacturers, calling attention to the fact that they are the only Western makers

as constructed in such a way as to give it important advantages over others. It is Hawley Iron Company, St. Louis, Mo., who

Plow No. 18, and is furnished, as desired, Wagon Hardware, and dealers in Iron, Steel with rolling coulter, with steel cutter, or and heavy goods, and Wagon, Plow and Carwith jointer. They also make an Iron Beam riage Materials, &c., their illustrated Tool circular for 1884. This circular is occupied with cuts and descriptions of a large line of Plow. Their perforated Corn Fender, a cut tools, materials and implements used by wagon makers and other mechanics. It opens with the Timken Gears, after which it shows a full line of Vises, Drills, Portable Forges, &c., and different styles of Presses, Bolt Cutters, Stocks and Dies, Boring Machines, Hollow Augers, Hammers, Braces, &c., giving illustrations of many machines and implements for the use of wagon makers.

Nash & Bro., Millington, Morris County, N. J., have issued a new edition of their pamphlet illustrating the Acme Pulverizing Harrow, to which we have before referred, and of which an illustration is found in our advertising columns. This pamphlet, like the last, fully describes the construction of the Acme Harrow, and gives the prices at which it is sold. But the greater part of the book is occupied with testimonials from persons who have used the Harrows, and to whom the manufacturers suggest that, if any desire further information, a personal inquiry may be sent, as the names and addresses are in all cases given in full. Of these testimonials, which are from parties widely scattered through the country, there are 2331, occupying more than 200 closely printed pages. From these testimonials practical suggestions may be gathered as to the different points of excellence of this article.

Among the "Special Notices" in this issue s one inserted by a manufacturing concern of New England, who desire a treasurer or active business manager who will furnish additional capital and be given full control of the business.

Isaac H. Terrell and Henry Vroom have formed a co-partnership under the style of Terrell & Vroom, who will carry on the business of Builders' Supplies and Hardware at 368 Eighth avenue, New York. Mr. Vroom has been in the Hardware business for nearly 20 years with the old house of John C. Johnson & Co., 36 Howard street, New York, and latterly with the successor of that house, Mr. Joseph T. Farrington. The Hardware business will be specially under his care, and Mr. Terrell will devote more time to his old business of Doors, Sashes, &c.

H. A. Wells, 727 Market street, Philadelphia, whose advertisement appears in this issue as manufacturer of the Common-Sense Sash-Holder and Lock combined, has made some recent improvement to that article, and has therefore advanced the list on the nickel-plated to \$12 per gross.

The advertisement of the Hardwood Refrigerators of which we spoke in a recent issue appears in another part of this paper, and illustrates some of their patterns and mentions their special features.

#### IRON.

American Pig.-Foundry Irons have been in fair request during the past week, some good-sized sales having been made to stove founders, while other buyers have appeared in the market for numerous small lots. Consumption in this vicinity seems to be increasing, as many of the local foundries which were idle at the beginning of the year are now in operation, and from them come encouraging reports of orders being received more freely for their goods. Not only does this give rise to expectations of improving business, but the anticipated early opening of navigation is credited with promising renewed activity in quarters which have not been heard from for months. It will probably be several weeks, however, until these influences fully manifest themselves, and in the meantime it will not be surprising if business drags along quite slowly and sales prove to be light. In Mill Irons there has been a limited movement, but inquiries are frequent, indicating a decided disposition among buyers to "shop" round in the evi but on orders for more than one gross the discount is 33½ per cent. The list is as fol-Chisholm's patent Strap Back; Solid Cast-held as they have been. There is as yet on indication of weakness in this market, though reports are current of lower prices 'Superior" Cast-Steel Scoops, Eastern and having been made elsewhere, which may Western pattern. The list is subject to a eventually affect prices here. It is difficult to comprehend how either Foundry or Forge Irons could be forced to lower rates than those which now obtain, as the average cost of production certainly leaves no margin of profit their best goods. They have just completed to the manufacturer, and additional blast furnaces are being blown out every month, owing to the unsatisfactory condition of business: but it is an unfortunate fact that cost does not govern the selling price, and if the demand does not justify the prevailing rate, it will continue to recede until a reaction street, Chicago, Ill., send their new illus- sets in from the operations of natural causes. We quote prices as follows, all at tidewater: No. 1 Foundry, \$20.50 @ \$21, with sales of special brands or retail lots up to \$22; No. 2 Foundry, \$19 @ \$20; Gray Forge, \$17.50 @ \$18.50.

Scotch Pig.-Imports during the past week have been larger than usual, owing to different styles of Springs of which they are the arrival of two vessels. Their total cargoes amounted to about 1500 tons, principally sold to arrive. The demand for Scotch of the Ribbed Spring. We learn that owing to the increase of their business they have been ing done in small lots at former prices. At obliged to move their factory to Hammond, present there is no indication of lower rates, Ind., where they have better facilities at though occasionally a spot lot is offered at Ohio, have recently placed upon the market less cost. They report the season's trade as the cost of importation, or below it, to save the expense of storage. Much less of this is We have received from the Paddock- now done than formerly, however, as the im-

prices Tank, Shell, 41/2 € @ Shee charac ume of ticular supply pect for Heavy 3.2¢. York W Steel mand a that the end. S more fi mprove owing with a Machine hearth ! 4#; Boi for spec Steel

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Plates

Billets of manufac Steel nd the q

neral Old M

Coltness, \$22.50 @ \$23; Shotts, \$22.50; Langloan, \$22.25 @ \$22.50; Summerlee, \$21.50; Dalmellington, \$20.75; Clyde, \$20.50; Gartsherrie, \$22.50 @ \$23 from yard, \$21.75 to arrive; Eglinton, \$20 25 to arrive; Carn- ported at \$18 on board cars at Jersey City. broe and Glengarnock, \$22.50 from yard and \$22 to arrive.

English Bessemer Pig.-No new business is reported, quotations from the other side being somewhat firmer, while buyers views, on the contrary, incline to still lower here, which are evidently much above the to Wednesday noon of this week : rate at which business might be done.

Spiegeleisen.-At present matters in this line seem to be at a standstill, owing to a similar condition of affairs to that which prevails in Bessemer Pig Iron. Sellers quote \$28.50 @ \$29, but buyers do not eem inclined to follow the upward move-

Bar Iron.—Business is not in an entirely satisfactory condition, although the demand for mill lots so far this month has been considerably in excess of last month; but prices are no better than they were, and makers seem indifferent about extending their sales, aiming that there is no money in the mannfacture of Bar Iron. Quotations are conseof the "shopping" character, as they lead quote as follows: Best Refined, from store, throughout the country: 2.15¢ @ 2.3¢; at mill, 1.85¢ @ 2.1¢; Common Iron, from store, 2¢ @ 2.1¢, and at mill, 1.7¢ @ 1.75¢.

Structural and Shaped Iron.-Considerable work is being entered in a quiet way, and this branch of the Iron trade ap. pears in conspicuously good shape at present Quotations, however, are unchanged, as folws: Angles, 2.4¢ @ 2.6¢ from store; Tees, 3.2¢ @ 3.5¢ from store; Beams, 3.5¢ on wharf for round lots.

Plate Iron.-The boiler-makers in this mmediate vicinity are securing more orders,

Sheet Iron.-Sales are of an irregular character, some dealers reporting a fair volume of business, while others find their particular trade quiet. Some of the mills which supply this market have notified their agents ere that orders are increasing and the prospect for an active season is brightening. For Heavy Sheets, Nos. 10 to 16, we quote 3¢ @ Lighter sizes are quoted in our New York Wholesale Price List.

Steel.-Indications of an improving deand are visible, and merchants are hopeful that the long period of dullness is nearing an end. Sales are somewhat larger in size and more frequent in number. Prices show no mprovement, but continue at about the folowing range: American Tool Steel, 101/20, with a concession to large buyers; Crucible Machinery, 6 1/4 @ 7¢; Bessemer and Openhearth Machinery, 33/4 @ 4¢; Tank Steel, 4¢; Boiler Plates, 4½¢@ 5½¢, with extra for special sizes; English Tool, 151/2 ¢.

Steel Billets .- Iron mills are developing strong tendency to devote some attention to the manufacture of Steel Bars and Shapes, and consequently they are in the market for Billets of special carbons from which to nanufacture a product that will supersede the better class of Iron. Domestic Steel nanufacturers do not seem willing to meet he prices at which foreign Billets can be aid down here, and consequently orders are eing placed abroad. The largest order of this kind which has come to our notice is of rroo tone The terms are private purchased.

Steel Rails.-We are reported transacons for the past week aggregating some 14,000 tons. Of these sales a block of 10,000 ons was taken by a Western mill. Part of the remainder consisted of light sections, on tons of 35-pound Rails having been sold at \$38 at an Eastern mill. The sales of avy sections were stated to have been at rates varying from \$35 to \$36 at Inquiries are becoming a little more bundant, and makers are somewhat firmer their views. The sellers at \$34 are fewer and the quotation of \$35 at mill is becoming

Old Material.—There has been an ineased movement in this line during the st week. Sales of some 600 tons of No. 1 ought Scrap have been made at about 1¢ b, from yard. Inquiries are in hand for Wrought Scrap is not in abunnt supply, although there is possibly igh in stock here for present require-In Old Rails several transactions en reported, 700 tons having been d at \$22, delivered at New London, Conn.; tons at Perth Amboy, at a shade under and 1000 tons having arrived here by mer from New Orleans, which were sold private terms previous to arrival. It is ing period last year, 2,827,298 tons. d that other lots are on the way here in the same point. The severe weather OLD METALS, PAPER STOCK, &c. the early part of the winter, and the proed rains of the past few weeks, have ined with the collection of old material and th the repairing of railroad tracks, so that ere has for some time been less offering in

ery here. We quote No. I Irons as follows: this line than usual; but it is expected that as soon as better weather prevails and out door activity is resumed, heavier stocks wil be available, and prices may then rule lower A sale of 50 tons of Old Car Wheels is re

#### TRANSACTIONS ON THE NEW YORK METAL EXCHANGE.

The following transactions are reported to us as having occurred on the floor of the Ex rates. Quotations are \$20 @ \$21, delivered change from Wednesday noon of last week

15			Av. February 13.—Second Cal Tin, April\$	
		T	HURSDAY, February 14.	
251	ons	Straits Ti	n, spot	.17%
1	0.0	4.5	April	.18
55	6.6	6.6	spot, on dock	.18
25	16	4.0	March	.17.90
		T	CESDAY, February 19.	
25 1	ons	Straits T	in, April	.17.93
25	6.6	66	66 66	18
-	In !	the days	not enumerated there	word

no transactions. The sales aggregated 165 tons of Tin at 1734¢ @ 18¢.

The furnace reports which the Secretary of the Exchange has received for the month of January indicate a very decided reduction in stocks of Pig Iron during the month, as quently sustained, because sellers are not pushing their stock upon the market. Inquiries are numerous, but they appear to be naces, of which 58 were in blast on February I, and 177 were out of blast. The following to very few transactions in proportion to are the aggregate statistics of stocks and their number. Store trade is still confined production from the furnaces reporting, and to small lots, and is without animation. We they fairly indicate the condition of affairs

All grades.	Unsold To		Production. Tons.				
An grades.	Jan. 1.	Feb. 1.	In Dec.	In Jan.			
Anthracite	80,455 49,621 48,797	26,885 41,959 42,882	22,152 44,880 16,290	20,182 38,081 9,018			
Grand total	128,883	111,176	88,822	67,281			

#### METALS.

Copper.-The market during the week has presented no new features, and, after the sale of some 150,000 lb Lake Superior at immediate vicinity are securing more orders, and the improved condition of their trade is reflected in the increasing quantities of Plates which are being called for. Full prices are obtained as follows: Common or Tank, 2.4¢ @ 2.6¢; Refined, 2.7¢ @ 2.75¢; Shell, 3¢; Flange, 3¾¢ @ 4¢; Extra Flange, ½½¢ @ 5¢.

Sheet Iran—Sales are of an irregular. Sheet Iran—Sales are of an irregular. Sheet Iran—Sales are of an irregular. Bottoms,  $24\phi$ ; Braziers,  $24\phi$ ; Sheeting,  $22\phi$ , and Bolt Copper,  $24\phi$ .

Tin.—The quotation for Straits Tin per cable from London last night was £82. 12/6, and to-day we are cabled Best Straits Ingot, spot, is £82. /10@ £83. 5/, and futures £83. 5/
@ £83. 15/. The market here has meanwhile remained quiet at 17% @ 18¢ for large lines, and 18¢ @ 18¼ ¢ for jobbing lots. Shipments from the Straits settlements to the United States in all 1883 have been 6838 tons, against 6522 in 1882, and 4955 the year before; during the first half of the current month they have been 150 tons; to England, Tin Plates.—Our market has remained.
We quote at the close, large lines, quiet. We quote at the close, large lines, ordinary brands, \$\pi\$ box: Charcoal Bright, \$5.62\psi\$ @ \$5.75; do. Ternes, \$4.95 @ \$5.12\psi\$; Coke Tin, \$4.90 @ \$5; and do. Ternes, \$4.75. Liverpool has also been quiescent, Charcoal at 18/@ 19/6, and Coke at 15/@ 16/. From London we are informed that Tin Plates are irregular.

Lead .- The purchasing by the one specu-Lead.—The purchasing by the one speculative party in the market has continued, and to the 500 tons we reported sold at \$4.10 last week, 900 tons have been added since at \$4.10, which is the closing figure on a very strong market, Refined being worth as much. St. Louis is strong at \$3.8: From London we are wired to-day as follows: "Lead is a little weaker. Common English Pig, £11. 15/ @ £12." Manufactures are quoted as follows: Lead Pipe, 6½¢; Sheet Lead, 7½¢; Tin-lined Lead Pipe, 15¢, and Block-Tin Pipe, 45¢, less the discount to dealers.

Spelter and Zinc.—Common Domestic Spelter continues in a very unsatisfactory condition at 43%, there being no demand to speak of. Silesian is, as heretofore, nominally purchased. Sheet Zinc has been very quiet at 51/2 \$\phi @ 53/4 \$\phi\$, at which figure it closes.

Antimony .- The market has been moderately active at firm prices, closing at 11 1/4 ¢ Hallett, and 12¢ Cookson.

The Anthracite Coal trade is quiet, with no special features. Prices are pretty firm, especially for manufacturing sizes, and may be quoted f.o.b. Broken and Egg, \$4; Pea, \$2.75 @ \$3; Steamer and Grate, \$3.75 @ \$4. The half-time output at the mines is sufficient for present demands, and no change in this respect is probable, perhaps not be-fore May, although a largely increased busi-ness is looked for when navigation opens, say about March 18th. Steamer Coal has been offered at very low prices on account of the competition of Bituminous. It is re-ported that Cumberland operators are quietly taking contracts in advance of the mencement of a new arrangement between the Pennsylvania and Baltimore and Ohio railroads; but nothing is definitely known. Special efforts are making in the direction of a substitution of Bituminous for Anthracite, in hopes of opening a wider field. Clearfield and Cumberland are quoted about \$3.75 @ \$4.10 alongside.
Anthracite Coal production this year to

date, 2,563,142 tons, and to the correspond-

	The purch	es off	ared by	y de	aler
ı	Copper, heavy light. Copper Bottom Yellow Metal.	 <b>P D</b> .	\$0.11 .10 .10 .0734	9999	.113

it	Brass, neavy	.09		****	
t-	" light	.07	00		
	Composition, heavy	.11	a		
11	Lead, heavy	.031	60	****	
	Tea Lead	.03		.0314	
r.	Zinc	.023	40		
h-	Pewter, No. 1	.14	@	*****	
	" No. 2	.10	@		
	Wrought Iron ? ton,	20.00	@		
	Light "	12.00		13.00	
	Stove Plate Iron "	10.00	(E)	10.50	
K		14.50	00	15.00	
DR.	Grate Bars	4.50	(1)		
	Stereotype Plates 19 16.	.043	600	.05	
	Electrotype "	.031	60	.0334	
0	Small Type "	.05	0	****	
-	The prices current (prices	naid	har	local	
	dealers) for Rags, &c., are as f	para	Oy	local	
k	dealers) for mags, &c., are as i	onov	VS:		
	Canvas, Linen	9 lb.	316	70.4 ¢	ŀ
	White Cotton, New	66		@¢	П
	No. 2	6.6	216	@ 2140	Ľ
	White, No. 1	6.6		@ 4 ¢	П
	" No. 9	6.6	134	m 2 e	
	Seconds	6.6		01 6	
4	Soft Woolens	Se.		06 6	
4	APPLE TELEVISION		D 6		1
	Mixed Rags	6.6			1
	Mixed Rags. Gunny Bagging.	66	116 (	@ 1340	1
	Mixed Rags. Gunny Bagging Jute Butts	66	114 0	@ 134¢	-
U	Mixed Rags	66	134 0 134 0 134 0	@ 1340	-

#### FOREIGN TRADE MOVEMENTS.

The following shows the imports of hard-

ware and metals	at	this	pe	ort	for	th	е	last
week, ending Feb	rua	rv 15	1					
,					Zen.		Vo	lue.
Anvils					185			1.845
Aluminum					1		9	882
Brass goods					27			2.260
Bronzes					7			665
Chains and anchors					55			2,467
Clocks					12			1,115
Copper								123
Cutlery					101		05	3,791
Guns					114			5,141
Hardware				4	47			.472
Iron, hoop								13
Iron, pig, tons				1.5	358		25	2,161
Iron, sheet, tons					64	0.		1.847
Iron ore, tons					111			2,586
Iron, other, tons					65			2.036
Railroad bars					154			.648
Lead, pigs					35			1,158
Machinery					04			,121
Metal goods					266			,420
Nails					16		144	338
Needles					96		4	,152
Nickel					11			,935
Old metal							-	31
Platina					0		43	2,991
Plated ware					8		-	252
Plumbago				1	50			961
Percussion caps					88		4	.881
Pins					43			,068
Saddlery					5		-	507
Steel				6,5			95	100
Spelter				55,1				808
rin, boxes				60.7				498
l'in, 9,469 slabs			8	72.2	28			020
Wire					91			.089
Zinc				15,6			0	698
The following is						rith	n	

vious dates :	a com	MI ISOII (	vion pre-
	For the week.	7 weeks of 1884.	Same time 1883.
Cutlery, pkgs	101	716	1.030
lardware, pkgs	47	42	238
ron, R. R., bars	2,454	9,220	40
ead, pigs	3,735	5,858	108
iteel, pkgs	6,568	82,194	288,615
in, bxs	60,749	213,707	941,273
Yn slabs, 1bs	872,228	2,770,127	2,873,355

#### IMPORTS

Of Hardware, Iron, Steel and Metals into the Port of New York for the Week ending Feb. 19, 1884.

Hardware,

Lundberg Gust.

maraware,	Bars, 95
Boker Hermann,	Billota 190
Hardware, cutlery	Billets, 188
and guns, pkgs., 42	Rods, coils, 231
Burkinshaw W. E.	Mason John W. & Co.
Packages, 4	Wire rope, coils, 4
Field Alfred & Co.	Naylor & Co.
Chains, cks., 5	Rivet wire, colls, 329
Packages, 7	Plock & Co.
	Wire rods, bdls., 1485
Gerdan Otto,	williamson Jas. & Co.
Bales, 14	Pig. tons. 400
Bundles, 178	Order,
Graef Cutlery Co.	Pig, tons, 250
Cutlery, cs., 5	Rods, bdls., 7536
Johnson & Co.	Wire rods, pkgs, 152
Machinery, pkgs., 18	Band iron, pkgs.,
Kemp Richard,	3420 Pags.,
Cask, 1	Wire rods, bdls.,
Lamarche H. & Sons,	3218
Mdse., cs., 6	Wrought tubes, lot, 1
Livingston Morris,	" Tought tubes, lot, I
Nails, bags, 208	Steel.
Merch, Dis. Co.	esces.
Guns, case, 1	Abbott Ione & Ct.
Moss F. W.	Abbott Jere & Co.
Files, cks., 2	Cases, 14
Montgomery & Co.	Wire, coils, 188
Packages, 2	Dolge A.
Mulford, Cary & Conk-	Cask, 1
lin,	Moss F. W.
Package, 1	Bundles, 26
Oestler W. C.	Bars, 10
	Cases, 3
Mach'y, pkgs., 11	Plock & Co.
Ransey & Co.	Tires, 50
Mach'y, pkgs., 11 Schoverling. Daly &	Wagner W. F.
	Bundles, 176
Gales,	Bars, 10
Mdse., cs., 94	Cases, 2
Guns, cs., 2	Order,
Sellers W. B.	Cases, 15
Cases, 2	Rails, 822
Spencer Arms Co.	Bands, 185
Tubes, cs., 5	Rings, case, 1
Taylor Thos.	Bars, 4
Cases, 7	Forgings, 2
Ward A.	BB-1 -
Cutlery, cs., 8	36-4-1-
Cases, 2	Metals.
Wiebusch & Hilger.	

Wiebusch & Hilger,
Cultery and hdw.,
pkgs. 24
Witte John G. & Bro.
Cotters of the plates, bxs., 500
Cotters of the plates, bxs., 500 Canadian Bank of Com-merce,
Tin plates, bxs., 500
Coddington T. B. & Co.
Tin plates, bxs., 96
Hendricks Bros.
Lead, pigs., 375
Ketchum E. & Co.
Tin plates, bxs., 628
Lazarus A. S. & Co.
Old metal, cs., 2
Phelps, Dodge & Co.
Tin plates, bxs., 3002
Winter & Smillie.
Tin, slabs, 716
Wittermann Bros.
Pewter pilas., cs., 2 Cutlery, cs., 2 Wright Peter & Sons, Gas apparatus, c Order, Mach'y, cs., 4 Pewter plts., cs., 2 Order, Tin plates, bxs., 2535 Tin, slabs, 6411 Lead, pigs, 939 Co. Old car wheels, 246

Of Hardware, Iron, Machinery, Metals,

&c., from the Por-	t of New York, for th
Dutch West India- Quan. Val Ptlm., gals3993 842 Mach'y, pkgs. 2 8	Guan. Val. Sew. ma., cs., 1798 29,65 Hdw., pkgs 107 1,89 Saws, cs 15 16 Ag. imp., pkgs184 56,85 Mf. iron, pkgs 14 1,28 S. rollers, case 1 7 Clocks, bxs 47 59 Frim, galsi, 185,394 108,40 Bullets, cs 3 9,0 Mach'y, pkgs. 12 2,08 O Valves, bxs 46 3,00
Dutch Guiana.	Bremen.
Clocks, cs 9 17 Ptim., gais5000 60 Hamburg.	Old metal, cs. 5 25 Cutlery, cs 8 12
Cartridges,cs 8 94 Pistols, cs 9 19	

Ag. imp.,pkgs Mach'y, pkge. Amsterdam. pairs... Hdw., pkgs... Brass gds., cs. Mach'y, pkgs. Sew. ma., cs. Iron, pkgs... Ag. imp.,pkgs 4 184 Mf. iron,pkgs. 9 75 Ptlu., gals. 786,100 72,449 Hdw., cs.... 17 584 Copenhagen.
Ptlm. gals. 116,437 12,600 Fenesucia.

Hdw., pkgs... 94
Pumps, pkge. 1
Saws, cs... 3
Tinware, case. 1
Cartridges, cs... 2
Shoe nails,bxs. 4
Tin plates, cs... 6
Ptlm., gals... 15,480
Mf. iron, pkgs... 18
Sew. ma., cs... 86
Clocks, pkgs... 5
Nails, bxs... 24
Revolvers, cs... 2
Buckles, pkge... 1
Mach'y, pkge... 1 Venezuela. London.

Hdw., pkgs. 116 1,800
Clocks, pkgs. 35 1,017
Ag. inp.,pkgs 914 18,774
Filters, cs. 5 96
Tubing, case. 1 146
Scales, cs. 34 993
Sew. ma., cs. 183 4,723
Wire, casks. 3 600
Mach'y, pkgs. 47 7,291
Plumb. mat'l.,
pkgs. 45 938 London. 45 938 pkgs. Liverpool.United States lombia 

San Domingo

Antwerp.

Quan. Val. Ptlm., gals, 350,000\$29,000

Rotterdam. Locomotive... I Mf. iron, pkgs 368 Sew. mchs.,cs. 273 Cutlery, cs. 49 Scales, cs. 15 Saws, cs. 5 Nails, cse. 1 Ptlm., gals .258,900 23,800 Wringers, cs. . 34 1,400 Hdw., pkgs. . . 30 2,106 Hull.

Ag. imp.,pkgs 574 8,887 Iron pipe, pcs 2068 19,870 Hdw., pkgs... 41 481 Mach y, pkge. 1 1,000 Mf. iron, pkgs 3 75 S. rollers, cs... 5 157 Falmouth. Zinc, pkgs... Copper still.. Nails, kegs... Qck'sl'v'r, flks Solder, cs.... Ptlm., gals.392,700 43,197 Glasgow Ptlm., gals....9650 lron safe..... 1 Mf. iron, pkgs. 88 MI. Iron, pkgs.
Steam pumps,
Ag. imp., pkgs.
Pumps, pkgs.
Locomotive...
Nails, kegs.
Brass gds., cs.
Mach'y, pkgs.
Spikes, kegs.
Hdw., pkgs.
Smokestack.
Clocks, case.

Ag. imp.,pkgs 22 Pumps, pkge. 1 Mach'y, pkgs. 21 Clocks, pkgs. 78 Hdw., pkge. 1 Bell. 1 Nails, bxs. 40 4,460 1,932 49 76 100 British West Indies.

Havre.

Bordeaux.

Palermo.

Salonica.

Hayti.

British Guiana Windmill, pgs 65 2,00 Ptlm., gals.267,138 22,37 Ptlm., gals..11,000 1,818 Hong Kong. Cartridges, cs 25 673 French West Indies. Clocks, case.. 1 Hdw., pkge... 1 British East Indies. Fiume. Ptlm., gals. 255,380-23,300 Ptlm,gal.1,026,520 116,250 Marseilles. Ptlm., gals.217,750 16,500 Mach'y, pkgs. 3 700 Hdw., es...

Cuba.

Ptlm., gals... 3500 Hdw., pkgs... 2 Cutlery, cs... 3 Pumps, pkgs. 2 Spikes, kegs... 5 Nails, kegs... 15 Sew. ma., cs... 9 Boiler Scales, case... Scales, case... Cartridges, os Pumps, pkgs. Tin, pigs. Mach'y, pkgs. Mach'y, pkgs. Clocks, cs. Hdw., pkgs. Cutlery, cs... Ag, imp, pkgs Sew, ma., cs. Tubes. Iron safe. 220 237 222 556 170 824 90 117 194 66 876 461 245 107 Central America. Hdw., pkgs... 32 Mf. iron,pkgs. 116 Nails, kegs.... 6 Firearms, cs... 4 Car wheels, cs. 2 Cutlery, cs... 6 Embos'g press 1

Mach'y, pkgs. 11 Ptlm., gals....4900 Sew. ma., cs. . 82 Ptlm., gals.291,960 35,085 Chili. Hdw., pkgs... Brazil. ### Ptlm., gals.118,329
Mach'y, pkgs. 102
Cutlery, pgs. 56
Mf. iron, pkgs 414
Car wheels ... 32
Clocks, pkgs. 14
Tacks, cs. ... 5
Cartridges, cs. 5
W. mill, pkgs. 9
Axles, sets. ... 6

Carriage 17 Nails, ess. 200 Ag. imp., pkgs 447 Carriage 200 Ag. imp., pkgs 44 Mach'y, pkgs. 8 Clocks, pkgs. 92 Ptlm., gals. 2810 Cutlery, cs. 14 742 3,703 218 323 50 235 546 84 2,572 268 50 135 206 135 206 187 Uruguay. Ptlm., gals. 10,000 Macb'y, pkgs. 2 Carriage..... 1 Clocks, bxs... 39 Ag. imp.,pkgs 116 Hdw., pkgs... 200 1,800 Gatling guns. 4 Mf. iron, pkgs. 375 Nails, kegs. . . 100 Genou. Hdw., cs..... 128

#### PHILADELPHIA.

Office of The Iron Age, 230 South Fourth St., (PHILADELPHIA, February 19, 1884.

The market during the week has been singularly flat and devoid of interest, but it cannot be said that prices are lower, withstanding the limited demand. Or contrary, there is quite a steady feeling, and while no improvement is looked for, there is a general expectation that the volume of business will increase during the early spring months. The large manufacturing establishments are doing a fair business, and appear to be somewhat sanguine as to the factory, however, and there is a disposition future, although prices are likely to rule low and business be done on a very small current. Small lots are quoted about as margin of profit. Perhaps the most important consumers of Finished Iron at present Cartridges, cs 3 946 Pilm, galsi, 754, 111 166, 793 Cop. matte, sacks...... 169 1,000 prospects ahead. The demand for locomo-

tives is not by any means what it was, and unless there is an early improvement there will be a gradual curtailment of work in many departments. Car-building is better than it was some time ago, all the shops doing something, with additional orders in prospect. Bridge-builders are busy and the outlook good. The demand for machine tools has fallen off considerably, and while most of the leading establishments are run ning with their usual complement of hands, some have reduced the number 20 to 25 %. and are somewhat in doubt as to the future. The manufacturers of saws, files, screws The manufacturers of saws, files, screws and hardware specialties report a satisfactory trade, with orders on their books fully up to their expectations. The demand for wood-working machinery has been and still is unusually active, and, notwithstanding their large facilities, the leading concerns are hard pushed to keep up with their orders. The general foundry trade is dull, although stove manufacturers, with but few exceptions, report a satisfactory business and fair prospects for the coming season. and fair prospects for the coming season. The most prominent characteristic seems to be the uncertainty as to the future. Almost every establishment has plenty to do for the present, and possibly for some little time ahead, but there is nothing reaching far into the future; hence the constant anxiety for new business, and the keen competition for every new order likely to be placed on the market.

Pig Iron—As may be supposed, is in sympathy with other branches of business, although the demand from one source or another seems to pretty well absorb the en-tire current production. Some companies profess to have orders to run their furnaces six or eight months, but a great deal of business has been entered that, as a matter of fact, amounts to nothing at all. Orders that can be canceled at the will of the buyer, and "price to be fixed at time of delivery" cannot, in any sense of the word, be looked upon as sales. But the trade is be looked upon as sales. But the trade is well aware that thousands of tons have been so disposed of within the pass six weeks. Such transactions give no stability to the market and no assurance as to the future. If it was positively known that the largest consumers had placed bona fide orders at fixed prices, it would impart a great deal of confidence to values but under present conconfidence to values, but under present conditions it has no influence whatever. At the same time there is no reason to suppose that prices will be lower, as the demand is likely to be fully equal to the supply, which is by no means large. Buyers act very cautiously, however, taking such lots as they require from time to time, according to the demand for their own products. Sales, therefore, have been chiefly in lots of from 50 to 200 or 300 tons each, at prices varying from \$20.50 to \$21.50 for No. I Foundry, and \$19 @ \$19.50 for No. 2, all delivered at tide. Buyers of larger lots can shade prices 25¢ @ 50¢ ?? ton on most brands, but there is very little demand of that kind at present. Mill Irons are not in specially cially active request, although at about \$18, delivered, good brands find a reasonably quick market. Some brands command a shade more, while others are as much the other way, due in most cases to exceptional circumstances. The market for this grade of Iron is somewhat uneven, and prices, at best, not more than steady. There is more Sew. ma., cse. 1 23 Mach'y, pkge. 1 90 Hdw, cs. 4 50 Platinum, cs. 2 8,000 Pumps, pkgs. 19 1,200 Ag. imp., pgs. 300 8,399 Ptlm, gals. 304,683 25,517 inquiry for Red-short Irons, and prospects of good-sized lots being called for by the Steel companies. One lot of 1000 tons No. I was taken at \$19 at furnace, which is the usual asking figure for that grade of Iron.

Muck Bars .- The demand is well maintained, and prices are steady as last quoted—say, \$31.50 @ \$32 at mill, the latter being the usual rate for good qualities.

Blooms.-There is a fair demand, with Sales at about the following figures: Char-coal Blooms, \$55 @ \$57; Run-out Anthra-cite, \$45 @ \$47; Scrap Blooms, \$42 @ \$43; Northern Ore Blooms, 39 @ \$41.

Bar Iron -The demand for small lots keeps up satisfactorily, but there is an absence of large orders, which is rather discouraging, manufacturers having to depend upon such business as may be presented from time to time. Prices are steady, however, and the outlook is rather more favorable than it was some time ago; sales chiefly on the basis of 2¢ for best Refined Iron, with slight concessions when the specification is very desirable. Skelp Iron is dull and nominal; no inquiries likely to lead to business at present.

Plate and Tank Iron.-There has been very little demand for Plate Iron of late, and no inquiries likely to develop into business of importance in the near future. Manufac-turers are fairly well employed on contract work, however, so that there is no scarcity of work for the present. Prospects are con sidered to be somewhat favorable for the spring trade, and a great deal of new business is likely to be placed on the market during the next six or eight weeks. Competition is, nevertheless, very close, and prices rather unremunerative. Quotations emain as before : Boat Plate and Tank Iron. .2¢ @ 2.3¢; Shell, 2.75¢ @ 2.85¢; Flange, 3.75¢ @ 3.85¢; Fire-Box, 4.75¢.

Structural Iron. -The market has been rather dull for some weeks past, and there is nothing at the moment to indicate any particular change. A great deal of bridge work is expected to be on the market before long, but in the meantime manufacturers are not running more than two-thirds their capacity, and are, therefore, somewhat anxious for new business. Besides the anticipated orders for bridge work, the cable roads here and ewhere are likely to require a great deal material, so that a larger demand is thought to be only a question of time. Prices remain as last quoted, viz.: Angles, 2.2¢ @ 2.25¢; Brid, e Plates, 2.25¢ @ 2.3¢; T's, 2.75¢, Beams and Channels, 3.5¢.

Shee't Iron. - The market is fairly active for the season, sales to date this year having been quite equal to the output, particularly in Thin Sheets. Prices are very unsatis-

follows:												
Best Refined	, No. 2	8.								0		454
Best Refined	, Nos.	26	an	d 2	77.							4
Best Refined	Nos.	21	to	25								334
Best Refined	Nos	16	fire.	20								31.

Common Red Plates, 3-16 to 10..... Blue Annealed. Best Bloom, Galvanized, discount. Second quality, discount......

Wrought Iron Pipe .- There seems to be no change whatever in this branch of the trade. The demand continues light and irregular, and prices are only moderately firm at about the same figures as quoted last viz. : Butt-Welded Black Pipe, 25 @ 30 % dis count : Butt-Welded Galvanized, 15 @ 20 % Lap-Welded, 45 @ 50 %; Galvanized, 25 @ 30 %; Boiler Tubes, 47 1/2 %.

Steel Rails,-There are no new features report, unless it may be that inquiries we been made for upward of 20,000 tons These Rails may or of Rails for new roads. may not be bought, according to the success of the projectors in negotiating bonds Meanwhile quotations remain at from \$34 to \$35 at mill on a cash basis, the market hav ing a firm tone. The mills have their capacity pretty well engaged for the next three months, and, with the usual summer demand in prospect, there is every reason to expect a steady market. Sales during the week have been chiefly in small lots at about \$35 at

Old Rails .- The market is somewhat ir regular and prices difficult to quote. A small lot of choice T's sold at \$24.50, but \$23.60 \$23.50 is more in accordance with the general market. The demand is almost as uncertain as the supply, however, and until the market is tested it is difficult to say what any particular lot will bring. Buyers' ideas are from \$22.50 to \$22.75 for large lots, and a trifle more on lots of under 200 tons.

Scrap Iron.-There is only a fair de Scrap from.—Inere is only a fair demand, but prices are well maintained. Choice No. 1 Wrought commands about \$24, f.o.b. cars. Cargo lots held at about \$23, with \$22.25 @ \$22.50 bid.

Nails .- The demand for Nails is fairly good for the season, and, as stocks are re-ported to be light, manufacturers appear to be somewhat confident of maintaining prices up to the present figures at least. Prices are tolerably firm, and about as quoted last week, viz.: \$2.60 for lots of the usual size, and \$2.50 as the lowest figure on large lots

#### PITTSBURGH.

Office of The Iron Age, 77 Fourth Avenue, PITTSBURGH, PA., Feb. 19, 1884.

The effects of the recent flood are now scarcely noticeable here, and, while there is no question about there having been a great no question about there having been a great deal of loss, directly and indirectly, it will fall far short of the first estimates. As stated in our last report, a great many of our manufacturing establishments were flooded, some of them consideraly damaged by water, yet they are nearly all in operation again, and a stranger passing through the flooded districts would little suspect that less than 10 days ago the water was from 2 to 6 feet deep in some of the main streets. From Wheeling to Cincinnati the damage was Wheeling to Cincinnati the damage was much greater than here. We might say that nearly every town from Pittsburgh to Cairo, a distance of some 1200 miles, will be more or less damaged, and thousands of people in the Ohio Valley will be dependent upon charity for the next 30 to 60 days. It is also feared that the Lower Mississippi will also creaters its hand, which will cause serious overflow its banks, which will cause serious damage from Cairo to New Orleans. This being the case, the outlook for general business in the Ohio and Mississippi valleys, which includes a very large and important scope of country, is not very promising

Ore -Advices from Cleveland in regard to the Lake Superior trade are more hopeful, but no perceptible improvement has been developed. Consumers are buying sparingly, although the belief obtains that prices, which now barely cover actual cost of production, have reached the lowest point.

Pig Iron.-There is an increasing inand as the market is firmer, cons ers are disposed to buy more freely and sell-ers more independent and less anxious to effect sales. Producers begin to feel that the worst is past and that a better market is near at hand, and the fact that consumer generally are more inclined to buy may be regarded as an indication that they are of the same opinion. We hear of some mill the same opinion. We hear of some mill owners who, until within the past couple of weeks, were buying no more than they could possibly help, being now willing to take weeks, were buying no more than they could be made, have advanced from 1/2 pt being now willing to take a much larger lots; and furnacemen who a few weeks ago would have been very glad to effect a round-lot sale, are now indifferent, preferring to sell in a small way. Thus, as hear of Wire being sold at lower figures, but will be noted, there has been a change in the position of the market to the advantage of the producer. Various reasons are assigned for this stiffening up, but the chief ones are the light production and reduced supply, both in first and second hands. It is but proper to state, however, that no material advance is looked for; furnacemen do not expect prices to go up more than \$1 \$1\$ ton, in view of the unremunerative condition of the market for Finished Iron, although the stiffening of the raw article will have its effect upon the products; hence the anxiety of some mill owners to buy for future delivery. Prices may be fairly quoted as follows:

No. 1 Foundry	\$20.00 @	\$21.00, 4 mos.
No. 2 Foundry		19.00, 4
Neutral Mill	17.00 @	18.00, 4
All-Ore Mill	19.00 @	20.00, 4 11
Cold-blast Charcoal	27.00 @	32.00, 4 44
Warm-blast Charcoal	34.00 @	26.00, 4 4
Bessemer 1ron	20.00 @	21.00, 4 "

We can report sales of standard brands of Neutral Mill (Lake Ore cinder mixture) at \$17.50, cash, and \$18, 4 mos., and Native Ore do. at \$17.25 @ \$17.50, 4 mos.

Muck Bar. - We quote nominally at \$32 It is offered at the price quoted, and might be bought for less.

Manufactured Iron.—The situation is more encouraging this week than last, the mills, having nearly all recovered from the effects of the flood, have started up again, al-though there will be but few orders from the flooded districts below for some weeks to mc. The market is firmer, in sympathy with the raw article, but prices remain unchanged and may be quoted on a basis of 1.8¢ @ 1.9¢ for Bars—that is, for assorted orders— 60 days, 2 % off for cash. We are advised of a contract having been closed for between 3000 and 4000 tons of Skelp at about 2¢.

Nails.-The Nail Association at its meeting last Wednesday made the base price \$2.60, 60 days, 2 % for cash, with the usual abatement of 10¢ \$\text{P}\$ keg on carload lots and upward, which is an advance of 10¢ keg. It was also agreed to bring the card down to actual selling prices. Trade at present is quiet, but an increased demand is looked for within the next week or two. Some of the factories have been started up; others are still idle.

Wrought Iron Pipe .- The demand con tinues light, and manufacturers do not look for much of an improvement until next month. No change in prices, which are being faithfully adhered to.

Steel Rails.—The mills here continue to eport the market steady at \$35, cash, on cars at mill, and there have been no sales made in this market for some time below the price quoted.

Old Rails .- We continue to quote Amer ican T's at \$23 @ \$24, according to quality, delivery, &c. We can report a sale at \$23.50, delivered at Youngstown, Ohio, and we are advised of a lot being offered at \$23.75, delivered in Pittsburgh. Consumers do not want to pay over \$23, but brokers say they can find none that can be sold at that

Railway Track Supplies .- Orders tinue light, but manufacturers are hopeful of an improved demand within the next few Prices remain unchanged. Spikes, 2½\$, 30 days; Splice Bars, 1.8\$ @ 1.85\$; Track Bolts, 2¾\$ @ 3\$, with Square and Hexagon Nuts.

Crop Ends, -The demand continues light and in the absence of sales we repeat former quotations—\$21.50 @ \$22—although they might be bought for less. We are advised of a sale of Bloom Ends at \$21.25, cash.

Steel.—The Merchant Steel trade remains substantially as noted a week ago; business fair, and prices unchanged. Best brands of Refined Cast Steel, 10¢ @ 11¢; Crucible Machinery,  $5\frac{1}{2}\phi$  @  $6\phi$ ; Open-Hearth and Bessemer,  $4\frac{1}{2}\phi$  @  $5\phi$ .

Scrap.—No. I Wrought Scrap is still uoted at \$20 @ \$21 net ton; Wrought quoted at \$20 @ \$21 net ton; Wrought Turnings, \$16 @ \$18; Car Axles, \$29 @ \$30; Cast Borings, \$12.50 @ \$13, gross; Old Car Wheels, \$18 @ \$19, gross

Coke.-Blast Furnace Coke remains uffchanged at \$1 79 ton free on cars at ovens, with a fair business.

Window Glass.—There is very little in quiry at present, and manufacturers do not expect much until next month. Factories are being started up, and it is not likely there will be any more Foreign Glass wanted

Petroleum.-The bottom has dropped out within the past week, and there is no assurance that hard pan has yet been

#### CHICAGO.

Office of The Iron Age, 36 and 38 Clark St., Cor. Lake St., Chicago, Feb. 18, 1884.

Hardware.-The demand for General Hardware during the past week has been steady, though buyers are taking goods only in small quantities. Articles for spring and summer use are as yet little called for. The principal trade has been on Screws and Shelf Goods. Since the breaking of the combina-tion the demand for Screws has been steadily growing, competition forcing prices to fig-ures which have become totally unremuner-ative. Many of the jobbers have been receiving orders for larger quantities than they are able to supply, and in order to avoid further complications some of the prominent houses have advanced the discount, and now quote Screws at 70 % off, with a view of check ing the demand for goods they cannot supply Barb Wire shows considerable improvemen within the past three weeks. Consumers within the past three weeks. Consumers having discovered that prices are gradually advancing, are anticipating their wants and placing orders in excess of their actual necessities. The improvement in price is largely attributable to the friendly relations that have recently been inaugurated by competitive mannfacturers.

Prices, which previous to this had been reduced to the lowest point at which Wire could be made, have advanced from 1/2 to reliable authority states that it is commonly known as a "moonshine" grade, and not re-garded as competitive upon the market prices for good Wire. In Heavy Hardware and Railroad Supplies there see change in the condition existing for several

-The action of the Western Nail Association has had rather a singular influence upon the market. The surface view is that the card rate has been reduced from \$3.40 \$3 keg to \$2.60, which would lead the unwary consumer to believe that prices had declined 80¢ a keg. Previous to the adoption of this scale, Nails were quoted from \$2.40 to \$2.60, according to quantity, in the general market. Since the adoption of the \$2.60 rate by the association, Nails have been advanced by jobbers to \$2.75 P keg for small lots, allowing a reduction of 10¢ P keg for carload lots. This advance has been a surprise to consumers and retail dealers, who previously had bought only in small quantities. They now come into the market with the hope of placing orders at former former while the orders at former figures, making the deman much stronger and exposing the scarcity of Nails in the hands of country dealers. Many of them are accepting the advance and are buying such quantities as they may need for immediate consumption, but the majority are not buying except in small lots, pre-ferring to wait and see just how the recent advance will stand.

American Pig Iron.-The demand for Pig Iron continues steady. The greatest dif-ference between consumer and seller seems to be the time of delivery. For immediate consumption, which by odds is the largest part of the present business, there seems to

There are a great many inquiries for future delivery, and it is supposed that three-fourths of the inquiries result in sales of one or the other brands of Iron at present quotations. These usually are in small lots and represent the majority of furnaces in blast. Orders for delivery beyond three months on Charcoal Iron are not so readily accepted. We hear that several lots of 500 tons each have been placed, to be delivered in from four six months, but furnaces still contend that prices are too low to warrant them in acceptorders covering more than one-third of neir annual production. In the present condition of the market there seems to be nothing to induce consumers to buy beyond immediate consumption. Prices are regarded as firm, with no possibility of declining Buyers who are in the market are mostly of the class who manufacture a staple line of Machinery, or who have accepted contracts for Finished Iron to be delivered during the year. Sales outside of these are largely to a class who have special contracts which they have secured, only renewing the demand each time a new order is received. We make the We make the following quotations for carload lots, 4 months, for present delivery: Lake Superior months, for present delivery: Lake Superior Charcoal, Nos. 1, 2 and 3, at \$22.50 @ \$23; Nos. 4, 5 and 6 at \$24; Lake Superior Coke at \$21 @ \$22; Lake Superior and Ohio, mixed, at \$21; Ohio Standard Black Band No. 1, \$22 @ \$23; Southern No. 1 at \$20.50, and No. 2 at \$19.50; Silvery Soft at \$19.50 @ \$21; Anthracite No. 1 at \$22, and No. 2 at \$21.

Scotch Pig Iron.-The market for Scotch Pig shows very little activity. The fact that foreign Iron is being supplanted by American has caused a rapid falling off in demand. During the past week we learn of several inquiries for small lots at figures reported to be about \$1 less than our quota-We still continue to quote Summer lee and Glengarnock at \$28, with a possible concession to favorite customers. Why prices have been cut here when they have materially advanced in the Eastern market is a question which has been puzzling some prominent dealers during the past week.

Merchant Steel .- During the past week there has been some improvement in the demand for small lots. The cut on prices by jobbers has had a disastrous effect upon the market for retail market for retail consumption, from which in all probability it will require several months to recover. We are informed by a prominent dealer that there is more cutting of prices at the present time than he has experienced for six years. Brands of Steel that have held established positions for years are fighting for extended recog-nition, which not only demoralizes the con-sumptive branch of the trade, but virtually destroys the profit for the contending par-ties, and also that of brands which are not in competition. Our notation last week of brands of Tool Steel having been sold at 8¢ @ 9½¢ under special circumstances has now become general, and is freely given out to the trade everywhere. There is a possibility of even these prices not being adhered to. For the Best Refined grades we make the following quotations:

0 1		
	Per po	un
Best Refined Cast Tool Steel	10 @	
Crucible Cast Machinery Steel	G14 @	63
Open-Hearth Machinery Steel	316 @	40
Bessemer Machinery Steel	314 @	40
Open-Hearth Spring Steel	334 60	40
Toe-Calk Steel	334 @	46
Sled-Shoe Steel, flat	294 @	30
Sled-Shoe Steel, curved	814 60	31
Bessemer Steel	8 @	31
Cast Plow Steel	434 @	53
German Plow Steel	434 @	43
Syndicate Steel	914 @	
Fire-Box and Boiler Steel	514 @	53

Steel Rails.-The market for Steel Rails is very dull. Railroads are not seeking to place orders, while mills are not endeavoring to contract for more than they now have. The asking price continues to be from \$37 to \$40, while for small lots it is possible that \$39 would be accepted.

Old Rails.—During the past week there has been considerable stock offered in the Old Rail line, for which \$20 @ \$21 has been quoted for Chicago or Milwaukee delivery. The demand at present is not urgent.

Bar Iron.-The conditions noted last week on the Bar-Iron market are unchanged. The jobbing trade continues fair. Heavy buyers are taking large lots for present and summer delivery, but, at the same time, are cautious as to quality. There is no question but that some of the Iron merchants are fa-There is no question vored on account of the quality of Iron, as we hear of dealers who complain severely of the dullness in trade. For Best Refined, new "puddled," we quote \$2 @\$2.10, from store. For carload lots, or orders particularly desirable, there is a possible discount of from 5¢ to 10¢, which appears to be bottom.

Norway Bars .- Norway Iron is said to be firm at 4¢ rates and no change in the demand, which compares favorably with the same period in previous years.

Builders' Iron.-Market quiet and prices nominally as heretofore. Tank, 2.7¢; Angles, 2.9¢; Beams, 3.6¢, and Channels 3.6¢@ 3.8¢.

Plate and Tank Iron.—The demand for Plate and Tank Iron is a little stronger than the week previous, but not of a character that denotes a steady growth. Steel Boiler Plate is in a trifle better shape and held quoted at \$6.50. We quote Tank at \$2.50 @ \$2.60; Shell, \$3.25 @ \$3.50; Flange, \$4.25

Galvanized Iron.-Manufacturers ort a quiet market from the jobbing trade, and what little business they have as co from orders for special sizes, which are all in small quantities. We continue to quote Juniata at 50 % off and Refined at 50 % and

Black Sheets .- No demand and no price eems to be the usual cry. Job lots are in he market and can be had at any price. ominally we quote No. 24 at \$3.20, Nos. 25 nd 26 at \$3.40, and No. 27 at \$3.60.

Scrap Iron.-The market for Scrap has come much weaker during the past week, furnaces having reduced their price to \$17 @ \$18, and stipulating that it requires an ex-cellent quality to command the latter figure. Pig Iron continues steady. The greatest difference between consumer and seller seems to be the time of delivery. For immediate consumption, which by odds is the largest part of the present business, there seems to be little difficulty in agreeing upon price.

| Cast-Iron | Continued the tenter figure. | We make the following quotations, which are dealers' purchasing prices: No. 1 Wrought Scrap, Pinet ton, \$17; Cast Scrap, Pinet ton, \$17; Cast Scrap, Pinet ton, \$15; No. 1 Stove Plate Scrap, Pinet ton, \$10; Wrought Turnings, Pinet ton, \$10; Wroug \$10; Tool Steel, \$7 ton, \$20; Steel Tire and Buggy Springs, \$9 net ton, \$10; Malleable during the past week, and it is thought to the past week, and it is thought to the past week.

Andrews Brothers & Co., Youngstown, Ohio, manufacturers of Bar, Band, Hoop, Tank and Sheet Iron, Patent Hot Polished Shafting, Bessemer, Foundry and Mill Pig Iron, have opened an office at No. 53 Dearfor the sale of their product. born street. Mr. John McLauchlan will have charge of the office. The firm solicit correspondence with him for prices, terms, &c.

EVERETT & Post, 156 Lake street, Chicago, report to us as follows, under date of February 16, 1884: Pig Lead.—Prices dur-ing the past week have ruled steady at \$3.75 @ \$3.80. The consumptive demand is very limited, owing possibly to its being between seasons in one branch of the Lead trade, but principally to uncertainty of prices caused by manipulation. The refiners, as a rule, are very firm in their ideas, some being our af market entirely, while others ask \$3.85 ond will not budge. If the refiners hold firm until the opening of spring trade, prices will undoubtedly go higher.

#### CHATTANOOGA.

Office of The Iron Age, Eighth St., CHATTANOOGA, Feb. 17, 1884.

Business in the South is seriously affected by bad weather, the overflows in the Ohio and fears of a like character along the lower Mississippi. These embarrassing elements are temporary in their nature, except the final effect of the floods in impoverishing large numbers of people with whom the South has close commercial relations, and probable future damage to the sugar interest. Business in a general way has been light. There has been no cuttting of prices: in fact, the hopeful tone noted in previous re-ports is more pronounced than it has been Producers are looking to increased output, preparing to that end, and expect to make fair profits during the year.

Pig Iron.—There is nothing new to re-port in the market. Liberal sales for present and future delivery continue. Consumers have doubtless arrived at the conclusion that they are not to get any lower rates, and they are therefore buying as if bottom had been reached. We quote No. 1 Foundry, \$18 @ \$19; No. 2 Foundry, \$16 @ \$17; Gray Forge, \$15 @ \$16; White and Mottled, \$14 @ \$15; Car-wheel Metal, \$24 @ \$26.

Ores.—We quote 50 % Brown Hematite, 8 ton, \$1.75 @ \$2; Red Fossil, \$1.50 @ \$1.75, delivered at furnace

Miscellaneous Articles .- Old Rails are quiet at \$22. The weather for two weeks has stopped renewals in the South, and stocks are low. Wrought Scrap, \$18 @\$22; Cast Scrap, nominal, at \$11 @ \$14; Old Wheels, \$22, nominal.

Nails—Are steady at \$2.50 for carloads, to days, 2 % off for cash; job lots, 10¢ @ 15¢

Merchant Iron.—Bar is steady at \$1.95 for large bills, 60 days, 2 % off for cash. Bolts, \$2.90 @ \$3.10; Spikes, \$2.30; Splices, \$1.90.

Coal.—We quote Fancy Lump at \$3.25; Common, \$2.50; run of mine to manufacturers, \$1.50 @ \$1.75 at mills.

Coke.—We quote Common at \$2.121/2 Poton; Best, \$2.75; Foundry at 10¢ Poushel.

#### LOUISVILLE.

GEO. H. HULL & Co., Commission Mer-chants, report to us as follows, under date of February 16, 1884: The market is quiet and February 10, 1864: The market is quite una sales are nearly suspended here on account of the flood. The demand from other secof the flood. The demand from other sections is good and prices are very firm. Southern furnaces are generally well sold ahead, and some are asking 50¢ and \$1 \$1 ton more for delivery 6 and 12 months ahead. Car-wheel Irons are still very low, with little demand.

FOUNDRY IRON. 

No. 1 Hanging Rock Stonecoal and			ŧ
Coke	20.00 @.	21.00	l
No. 1 Southern Stonecoal and Coke	19.00 @	19.50	ł
No. 2 Southern Stonecoal and Coke.	18.00	18.50	l
"American Scotch"	17.50 @	18.00	I
Open Silver Gray	17.50 @	18.00	ı
Close Silver Gray	16.50 @	17.00	ŀ
MILL IRONS.			ŀ
No. 1 Charcoal	19.00 @	20.00	ı
No. 1 Stonecoal and Coke, Neutral.	17.00 @	17.25	
No. 2 44 44	16.25 @	16.50	ľ
No. 1 " Cold-short	16.50 @	16.75	
No. 2 " " "	15.75 @	16.25	
White and Mottled, Cold-short and			
Neutral	14.50 @	15.00	
CAR WHERL IRONS.			
Hanging Rock, Cold-blast	28,00 @.	80.00	
Warm-blast	22.50 @	23.50	
Alabama and Georgia, Warm and	-		
Cold-blast	28.00 @	27.00	١
Central Kentucky, Cold-blast	25.00 @	26,00	
		-	

W. B. BELKNAP & Co., Iron and Steel Merchants, Nos. 115 to 121 West Main street, Louisville, under date of February 16, report the market for the past week purely local it has had scarcely any connection with the cutside world. First one railroad and then another succumbed to the ever in-creasing flood, till the Louisville and Nashville south was the only one left open for in-terrupted traffic. Bar Iron.—The demand is good and we should not be surprised to see a better range of prices after the flood, which really means a two weeks' stop for all the mills in the Ohio Valley. Sheet, Bands and Hoops.—No quotable changes. Nails are growing very scarce. Counting on resumption of work by the mills the first of this week, jobbers had let their stocks run down to the lowest possible ebb, and now the flood has prolonged the stop from one to two weeks, at any rate. The new card, \$2.60, is accepted as the probable price for a while. Wire.—There will be a large consumption of wire, as the destruction of fencing has been

#### CINCINNATI.

FEBRUARY 18, 1884.—Fig Iron.—During the past week the business has been confined almost entirely to filling orders for car lots from the interior for immediate uses, and ship direct from furnaces on old and new orders. Many of the foundries and rolling mills in this city have been stopped by the

none of them will resume operations March I. Aside from delay and exp cleaning up after the flood, it is the there will be but little damage. N houses in the low and flooded distric than the old and somewhat dilatones, as yet are showing signs of Many of the large manufactories beaviest mercantile houses are situated in the state of the stat inundated district, and had time, braced it, in putting their perishable out of the reach of the flood. estimate, somewhat more accurate estimate, somewhat more accurate first, gives the number of persons we relief at less than 5000 within limits, all of whom are being well for. The rolling mills and foundrie ington and Newport and the rolling Riverside are submerged, but after houses had been put in order. It mated that the loss to foundries, n shops, rolling mills and workmen overflow will not aggregate one-lactual loss from strikes in 1882 a This season of forced respite from has brought our manufacturers tog new rôles, charity, and new enter business, and before the stormy mont passed the now-flooded portion of our will present no traces of disaster. Quota for the past week.

for the past week :		
Hanging Rock Charcoal, No. 1 Foun-		
dry	\$23.00 0	
Southern	20.00 @	21.70
No. 2, \$1 less.		
Cold-blast Car-Wheel	27.00 @	20 m
Warm-blast	24.00 @	27, 10
Hanging Rock Coke	20,000	
No. 2, \$1 less.	18.00 @	1) -
American Scotch	20.00 10	
No. 2	19.00 -	
Best Hanging Rock Silver Grav		
Softeners	19.00 @	10.36
Others	17 00 0	
Forge, Stonecoal, Coke & Charcoal.	16,00 0	(40

#### ST. LOUIS.

HOFFER & Co., Pig Iron and Iron Merchants, 214 Pine street, report to follows, under date of February 16, There is little to report in the way provement in business. Sales are somewhat better, but not so active as expects We continue quotations:

HOT BLAST CHARCOAL IRONS COAL AND COKE IRONS. Missouri Southern Ohio MILL IRONS.

Red-short..... CAR WHEEL AND MALLEABLE IRONS. 
 Missouri
 19.50 @ 21

 Southern
 25.00 @ 22

 Ohio
 28.00 @ 32
 EVERETT & Post, 421 North Third street

Louis, report to us as follows, under da February 13, 1884: Pig Lead.—Durin, past week the market has advanced, us a demand partly consumptive solution. speculative, to sales at 33% St. Louis, 4.1¢ New York, for both Refined and mon brands. Just now there is rea little pressing on the market. Produ not anxious to sell, and with the stocks centrated largely in speculative hands w may be forced higher, and possibly be a tained until a spring demand will be manufacturers into the market; for present, however, their wants see fairly supplied.

#### BALTIMORE.

W. N. WYETH, Iron and Steel Merchan, 46 and 48 South Charles street, reports we the following, under date of Feb. 18, 1884; A fair average trade was transacted the past week, but all confined to very close margins, as per annexed figures :

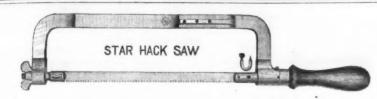
Ref. Bar Iron, 1 to 6 x % to 1... % b 2
" 1 to 4% x 1% to 1... % b 2
" % to 2, Round and Square. "My to 2, Round and Square. Hoop Iron, 1½ wide and upward Band Iron, from 1½ to 6 in. wide Horse-shoe Iron. Norway Nail Rods. Black Diamond Cast Steel. Machinery Steel. 

## Our English Letter.

(From Our Regular Correspondent.) LONDON, ENG., Feb. 4, 1884 THE SITUATION

is still a quiet one, and, as the remathis report will serve to show, the not been many variations to note penned my last letter. During the days cablegrams from New York he received here speaking of a market sion of firmness in your iron mar some increase in the quotations for kinds of pig iron. These message kinds of pig iron. These messe been regarded with much curiosit iron men, many of whom are now endeavering to ascertain the why wherefore of the improvement American market. Up to the time writing I have not heard that markets has attended these inquiries, yet have can be no question of the improvement. there can be no question of the of the subject to ironmasters in this and in Europe generally. Should y ket move in an upward direction t preciable extent the change w doubtedly strengthen the hands (an of venders on this side; hence a fluctuations now and in the near future. be watched with uncommon intere not, personally, one of those who leavishing like a big boom with you, must confess that your market is not an easy one for a benighted Britis follow, nor does it seem possible follow, nor does it seem possible followers agacious persons on either side Atlantic to predict, with anything Atlantic to predict, with anything bling certainty, what is likely to hal month or six weeks ahead. Should a mand spring up for scrap or crude iron on your account I should, of course, 1884

=,



MEDINA, OHIO, Feb. 1, 1884. Millers Falls Co., 74 Chambers St., New York: GENTLEMEN—Please send me 12 more of your new Hack Saws like the sample sent a few days ago. It cuts truly wonderfully. Our machinst sawed off a round bar of steel, 1½ inches in diameter, in sbout three minutes. Just as soon as he cut it off he handed over the money for the saw, declaring it was his property.

Respectfully.

Respectfully, A. I. ROOT, Publisher of "Gleanings in Bee Culture."

Kansas City, Mo., Jan, 30, 1884.

Millers Falls Co., New York City, N. Y.: Inclosed please find \$3 for two of your Star Hack Saws and two dozen saw blades for same. The two sets were received to-day which were ordered last week, and their performance is so satisfactory that two of my friends asked me to send for sets for them.

Very respectfully, R. H. BACOT. Moss Point, Miss., Jan 19, 1884.

Millers Falls Co., 74 Chambers St., New Yo. k : GENTLEMEN—Please find inclosed \$3:.05. for which please send two dozen "Star Hack Saws" (\$3:2.4c), and one ex'ra dozen 3-inch saws (65 cents) as per your price list. The Hack Saw you sent me a few days ago is THE thing. The two dozen more ordered are for mechanics in my immediate neighborhood. You may expect further orders soon.

Manufacturer of Steam Engines, Gang and tircular Saw Mills, Brass and Ircn Castings Forgings, &c.

YANKTON, Dak., Jan. 15, 1884 Millers Falls Co., 74 Chambers St., New York: GENTLEMEN—Send me one Star Hack Saw as good as you lately sent Mr. E. C. Johnson, my tenant. Find enclosed \$1.50.

A. W BARBER.

We have sold many thousands of these Star Hack Saws, and, so far as we have heard. every one of them has given satisfaction. Hardware Dealers in all places will promote their own and the interests of their customers by keeping these goods in stock. There is a fair profit on them and not a bit of risk, as we will take back at any time all the saws which you wish to return, and pay freight both ways. Send for Price List.

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H. B. SEIDEL.

# SEIDEL, HASTINGS &

WILMINGTON, DELAWARE

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AND PLATE IRON GENERALLY.

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GRAY IRON CASTINGS

METAL PATTERN MAKERS AND JAPANNERS.

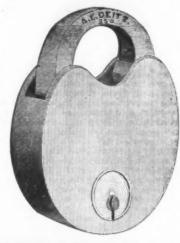


CLARK & COWLES,

ALL RINDS OF KIVETS.

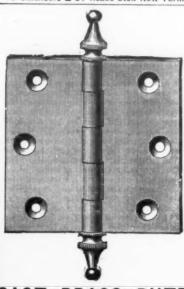
Plainville, Conn.

## A. E. DEITZ.



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WM. FRANKFURTH & CO., Milwaukee, Wis. WALTER S. LUDLOW, Cincinnati, Ohio. LLOYD & CLARKE, La Crosse, Wis. H. MITHOFF & CO, Columbus, Ohio BURROUGH BROS., Kansas Ci'y, Mo. THE TODD-DONIGAN IRON CO., Louisville, Ky LAYMAN, CAREY & CO., Indianapolis, Ind. A. E. BONESTEEL, Troy, N. Y. PERRIN BROS., Lafayette, Ind.

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Being made of the very best malleable iron, cannot be broken; are heavily ribbed where needed; cannot be bent; easily put up; no cutting or grinding on small journal-pin, and can never, from use or wear, be forced from the track. Always working free and easy; no chocking or binding. The force applied to the door is always transferred to a roller. No joints to pound and jump over. A continuous track (merchant bar, 3-16 or 1/4 x 1 1/4) is a cheap and desirable feature. Special inducements to the trade. Correspondence solicited.

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you prompt intelligence by cable. That being so, I need not dwell hereupon now American market was no longer "the key to our iron trade," as the old phrase went, but happenings often come about very strangely, and it would now be scarcely astounding to find an improvement with you followed by a decided change for the better

The doings of your Congressmen on tariff matters are being followed with an amount of attention which may almost be styled languid, yet which is possessed of a base sufficiently broad to permit of a rapid expansion should circumstances arise to lead to the hope that a sound measure stood any chance of passing this session. Unless the change threatened by the Democrats should be really radical, I fancy our manufacturers and exporters would much prefer that there should be no alteration at all. As a matter of course, we of this country have no actual concern in your Congressional proceedings, but as we happen to be near relations, and but as we happen to be near relations, and still do a considerable business with you, any material alteration in your tariff must also affect us, and cause us more or less trouble in adapting ourselves to the incidence of the new state of affairs. It is telegraphed that the Ways and Means Committee are likely to recommend a general reduction in your tariff of 20 %, but, as that drop would virtually extinguish a goodly number of the present duties, the statement is regarded as being "too good to be true"—that is to say, we don't quite believe that there is the most remote chance of such a reduction being adopted. We are curious to note the outcome of the tariff fight, but there are few Britishers who are sanguine enough to flatter themselves that you are about to forsake protectionism.

#### THE IRON MARKET

has been a shade quieter on the week, es pecially in the open markets of Scotland and the North of England, where the general dullness of trade and the results of speculative movements have had the effect of bringing about a slight relapse from the tentative activity of a week or two back. So as can be judged from the trade reports of the period and the average tenor of conversation in the trade, there is no improve-ment noticeable in any branch of importance. In some departments there is still a fair turnover, but profits are said to be quite meager, and there is a constantly-growing keenness of competition for such new orders as are from time to time put forward. The makers of almost all kinds of shipbuilding iron are experiencing a diminished demand, which will shortly have somewhat serious results upon the rolling mills of the North. At present these mills are tolerably well engaged in the completion of old contracts, but the end of this quarter will find their books very bare unless some change for the better should take place in the meantime. As a consequence of this almost universal depression, prices have become nominal all round, and the actual figures realized are in scarcely any case those published or put forward on lists. On the whole, therefore, the situation must be deemed anything but favorable, while the outlook is very dull. At the same time, there are those who look for an amendment before long, especially if the improved condition of your iron market should gain strength. From one cause or the production of pig iron in this country is now being very considerably restricted, yet the stocks appear to be grow-ing in many quarters; hence it seems likely that a yet larger method of restriction will have to be put in force as a means of meeting the lessened consumption. The Northamptonshire ironmasters held a meeting on Tuesday, January 29, and had a long discussion as to the state of their trade. It is understood that they met in order to arrange the details of a general scheme for effecting a limitation of the output, and I believe that something of the kind was settled, but, as the meeting was a private one, I am not able to state more specifically the decision arrived at. In other parts of the country the smelters at. In other pares of the country the smeiters are reducing their make as much as possible, with exceptions in two or three instances where the rise in Cleveland pig seems to afford the opportunity of more successfully competing with it.

At Glasgow warrants have been less fever-ish and rather lower in range, closing to-day at 43/3 %? ton. Shipments of Scotch pig are less than last year to date, while Con-nal's stocks are being augmented in spite of the reduced make. Makers' brands of Scote pig, however, remain steady at the lat advance. At Middlesboro' values are shade easier, notwithstanding the impendin limitation of the production by about 15 pe cent. Shipments are only moderate, and the local consumption is decreasing. For No. 3, 37/@ 37/3 is quoted, but sales are reported to have been made at 36/9 ?? ton. It is satisfactory to all parties that the wages question has been settled by the arbitrator without a dispute. On the West Coast the strikes of the furnacemen had attained serious proportions, and many of the furnaces have been damped down, but a partial resumption has now come about on the employers' terms. Here, again, the make has been lowered by quite 25 per cent., yet stocks are not intrenched upon, and selling values have scarcely gained a point, mixed lots in usual proportions being obtainable at 46/6 @ 47/f) ton. Heavy manufactured 46/6 @ 47/ 12 ton. Heavy manufactured iron is dull and rather lower, particularly ship plates, angles, bulbs and tees. In fencing wire I hear of no movements of note despite the inducement to buyers in the shape of extremely low prices. German competition is much felt, both in rolled and drawn. As recards barbed wire, we appear to be likely to witness litigation similar to that which has been in progress for so long a time in the United States Galvanized iron is still dull, and quotations are very bare in all directions. New markets being sought for these sheets, but they New markets ar not compensate for the slackness of the Australian demand. As regards ordinary finished iron, I have scarcely anything that is new to report. Best Staffordshire marked bars are unchanged, but quite nominal, at £7, 10/, medium un branded bars being £6, 10/ @ £7; ordi; continue quiet, and the demand is somewhat nary, £6 @ £6, 10/ and common Welsh less than it was. Orders just now are re-

That £5. 2/6 @ £5. 5/ P ton for usual assortments. The sheet-iron manufacturers are further than to reiterate my observation that our future is once more apparently in your hands. It had been thought that the really busy. Hoops are quiet at £6 @ and galvanizing sorts, but none of them are really busy. Hoops are quiet at £6 @ £6. Io/. Swedish hammered bars are not very active at £9. Io/ @ £10 \$\frac{10}{2}\$ ton. In iron rails the current business is small. Old rails are in rather better request, with inquiries from the United States for steam shipments of D. H. The supply of these materials is only limited. Heavy wrought scrap iron is quiet at late rates. Freights scrap iron is quiet at late rates. Freights are unaltered and easy, as a rule. Pig iron by ordinary steamers, Glasgow to New York, is about 5/ P ton. Steel is without other than minor alterations, and few of the manufacturers at Sheffield have more than an average amount of work in hand. Bessemer concerns are also quiet, albeit some of them are pushing rolled sorts with much determination. Blooms for export are much determination. Blooms for export are not wanted, nor does there appear to be much doing in crop ends. As I have previously mentioned, Siemens plate scrap is now being largely used by the nailmakers and others. For old railway leaf-spring steel there is a little stronger inquiry, chiefly on American account. Steels rails appear to have undergone a considerable improve-ment, entirely owing to the combination for reducing the make. I have as yet no pre-cise details of the scheme in question, but it is understood that the limitation will be to the extent of about 20 %, and will be continued so long as the depression exists. Prices have been advanced to £4. 17/6 and £5 % ton for ordinary heavy sections, and it is stated that a fair order has been placed at over £5 % ton—probably the same order as that referred to in my last letter. The dispute at Bolckow, Vaughan & Co.'s Eston Works is now virtually at an end, the ma-jority of the men having accepted the reduction in wages of 10 %.

SCOTCH PIG IRON has been easier and has relapsed slightly in the open market as regards warrants, albeit almost all the named brands have been tolerably firm. The voluntary limitation of the output to which I have alluded in my recent letters is being continued, yet it is worthy of notice that there are heavy weekly additions to the reserve stocks, and that the shipments continue to show a decrease as compared with last year's figures. The number of operative furnaces in Scotland is now 95, against 97 last week, and 110 this date 1883. In Connal's stores there are 590,456 tons (an increment of 1982 tons last week), against 600,716 tons a year ago. These figures help the bears. The shipments to date this year have decreased by 4656 tons (all on coastwise lots), while the importations of Middlesboro' pigs into Scotland have increased by 3069 tons. Warrants are now 43/9, against 47/6 a year ago. Writing from Glasgow on February 2, James Watson & Co. said: "The Scotch iron market has been flat this week; with only a restricted business doing, and makers' iron has not been in great request, although prices remain very steady. The warrant market opened flat last Monday, the warrant market opened flat last Monday, the price declining from 43/6 to 43/1½ \$\mathbb{P}\$ ton. On Tuesday it rallied from 43/2 to 43/4½ \$\mathbb{P}\$ ton. On Wednesday it was rather firmer, with a small business transacted from 43/4 to 43/5 \$\mathbb{P}\$ ton. Yesterday it was a shade easier, the price dropping to 43/3, closing at 43/4 \$\mathbb{P}\$ ton. To-day the market recovered from 43/3½ to 43/6½ \$\mathbb{P}\$ ton, closing with sellers at the latter figure, buyers offering 43/6, cash. The shipments last week were 68 to tons, as compared with 8788 tons for the corresponding week of last year." We quote:

										No. 1.	No. 8.
G. M. B., at	Glasgow									45/6	43/
Clyde,	44		0				0	٥.	۰	48/	45/6
Coltness.	44									58/	52/
Langloan.	6.0									55/	51/6
Gartsberrie,	44									54/	52/
Summerlee,	0.9			0.4						58/	49/
Calder,	9.9									54/6	48/
Carnbroe,	46 -									58/6	49/
Glengarnock.	at Ardr	10	M	a	n					58/	46/6
Eglinton.	6	6								47/	48/9
Dalmellington	3. 6	4								49/6	47/6
Shotts, at Lei										54/	52/
Kinneil, at Bo	ness									47/	46/
Carron, at Gr										49/	47/6

#### MIDDLESBORO' PIG IRON

is very quiet indeed, and values show slight decrement, although there is said to be a slightly better demand for forward lots. The local mills and forges, however, are beginning to show marked signs of slack-ness; hence all parties fear a decrease in the consumption which is hardly likely to be compensated for by enlarged shipments. For No. 3, 37/@ 37/3 or 37/6 are current rates, while G.M.B., f.o.b. at makers' wharves in the Tees, not cash. are:

No. 1	Foundry	 41/3	Mottled
11 2	8.6	 39/3	White
** 8	6-6	 87/8	Refined metal
50 4	6.6	 86/ 1	Kentledge
11 4	Forge		Cinder

The Tees shipbuilders contemplate a reduction of 20 % in the wages of their workmen and in some cases notices have been served to that effect. These notices will expire at the end of February. The men agree to accept a general drop of 7½ %, but the employers declare that reduction would be insufficient and unacceptable.

#### HEMATITE PIG IRONS

are not in any sense stronger—indeed, now that most of the men who had been on strike in the West Cumberland district have in, the market may be said to be a shade pier, owing to the augmented production casioned by the settlement. Mixed lots are nominal at about 47/, and West Coast

								No. 1.	No. 2.	No.
Cleator					 			47/6	47/	46
Lonsdale.								48/6	47/6	47
Working	ton							425/	47/6	47
Lowther.								487	47/6	47/
Distingto								48/	47/6	47/
Harringt								48/6	47/6	47/
Solway								48/6	47/6	47
Maryport								48/6	47/6	47)

North of England hematite pigs, f.o.b.

No. or	quality		Ordinary.	Bessemer
		 		99/
		 	51/	48/
		 	50/	47/
Found	rv		49/	47/
. Forge			49/	47/
lottled.			49/	47/
Vhite		 	49/	001

continue quiet, and the demand is somewhat

stricted to special lines of odd sizes and squares. For these, however, somewhat better figures—6d. or so—are obtained than for ordinary sizes. As for the latter, in or-dinary-grade brands it has been difficult on more than one occasion this week to obtain 15/3. Apparently there is no demand for ordinary-size cokes until they are offered by are offered. The talk is that there are certain brands, or a certain brand, still offering at the latter figure, though no authenticated sale has yet been made known. The prices at which good brands can be obtained continue to be 15/6 @ 16/. Coke-tin wasters are again somewhat quieter, but 14/6 @ 15/ is obtainable, and even a trifle more occa sionally for certain good brands. Charcoal ternes, in good brands, are selling as low as 15/6@16/. I. C. and 28 x 20, 32/@32/6; others are quoting higher figures. Best cokes and steel plates with coke finish are in fair demand, but prices are low, and this will be easily seen when such figures as 16/and 16/6 T. C. are mentioned. The freights from Liverpool direct to the States have been The freights reduced to the very lowest point possible, 5/6 \$\frac{1}{6}\$ ton, in order to get hold of the bulk of the trade in tin plates, and though the coasting steamers from Linanelly and Swan-sea charge only 5/ 27 ton, yet the Swansea steamers sailing still hold their own and secure sufficient to keep three or four going out full loaded monthly.

CARDIFF TRADE WITH THE UNITED STATES. 1 am favored with the subjoined remarks Messrs. Edwardes, Robertson & Co., of rdiff: "In perusing the annexed figures, Cardiff: it will be seen that there is but little altera-tion in the exports from this Channel during the past month as compared with the pre-vious month. The shipment of tin plates has been about the average, but the decline in the export of other materials which has been apparent for some time past continues, and without any sign of early improvement. The freight market continues depressed, and the low rates current, as named in our last report, do not seem to stimulate the demand for shipping. There have been recent inquiries for tonnage for Baltimore, and we expect some shipments will take place this month." The shipments to New York included 105,075 boxes tin plates, 445 boxes black plates, casks ferromanganese, 2 casks lead pipe, 1 crate hardware, 1 case machinery, 140 casks yellow metal and 3 iron ladles. To Baltimore, 15,781 boxes of tin plates were sent.

#### FOREIGN.

(Moniteur des Interets Materiels.)

Paris, Feb. 4, 1884.— Metals.—Business in general has begun to pick up a little; still, it is far from being what it should be so near the spring months. Metals have been dull and weak, each having receded a little from the previous week. We quote at the close: Copper.—Chili Bars, 142.50 @ 147.50 francs W 100 kg.; Ingots and Slabs, 155; feats Selected, 160, and pure Corocoro Ore, 155; francs. Tin.—Banca, 230; Billiton, 226, and Straits, Australian and English, 225. Lead, 230 @ 30, and Spetter, 38.50. Iron.—No revival is as yet perceptible in the Iron branch. At the North wages have had to be reduced 19 s, and the week's work does not exceed four days, there being a lack of orders. Rolling mills sell at 15.25 francs. New contracts for Steel Rails are taken at comparatively low figures for the maker; thus the Orleans Railroad has obtained them at 173.50 francs W ton 10 Hanishave sold at 89 francs W ton by the Eastern Railroad Company, the latter having at the same time bought their Steel Axless at Cockerill's, in Belgium. The falling off in the amount of Finished Iron and Pig imported into this city is remarkable for the first 11 months of 1883, having been only 45,500 tons of the former, against 57,305 in 1882, and 36,181 of the latter, against 45,075 in 1822. This year it is likely to be still greater, in consequence of the forcible reduction of building. At the same time, the import of Steel is steady. We are now in possession of the import and export statistics for the whole of France for the year, from which it appears that there were imported last year 308,122 tons of Pig, against 43,05 in 1882. Poins of Steel, against 46,061. Of Iron Ore 1,597,306 tons have been imported, against 1,425,578 in 1882. Coal.—The movement in Coal has been slack—in fact, it has diminished from day day; in the first place, because industry in France is less active than in former years, and, in the second place, because the mild weather has checked consumption for domestic use. (Moniteur des Interets Materiels.)

BELGIUM.

(Moniteur Industriel.)

BRUSSELS, Feb. 4, 1884.—Iron.—The slight spurt which was noticeable the other day in response to a temporarily better feeling in the North of France, has not lasted, and we are now about as dull again as we were before. In order to sell large lots of Iron, concessions would have to be made on the ensuing quotations: English Pig. 5.30 francs § 100 kgs.; Charlero, 6.75; Pudding Domestic, 4.25 @ 5.35; Athus and Halanzy, 4.60; No. 1 Merchant, 12; No. 2, 12,75; No. 3, 13.50; Beams, 12,75, and Corners, 13.25; Sheets, No. 3, 16; No. 3, 18; Commercial, 22; Thin, 34 and No. 4, 26. Prices are so low at present that consumers will find a real inducement in them to anticipate requiremects. There are indications that they soon may act in this sense. There is, besides, a bill that has just been introduced advocating that the Government undertake to build a certain number of branch railways. The Government has hesitated a long time, but is now, it appears, ready to entertain similar ways. The Government has hesitated a long time, but is now, it appears, ready to entertain similar views, which would, if carried out, prove an important aid to our suffering Iron Interests and kindred branches connected with railroad material. Of more immediate interest is the receipt of some export orders which have dropped in, and which, in view of the depression of prices here, seem to have been singularly well-timed. We, indeed, believe that it will be very difficult for any neighboring nation to compete with Belgium at present in point of cheapness in Iron and Steel. Coal is to a notable extent affected by the quiet which pervades industry in this country for the moment. Stocks have been accumulating, even in the Liege Basin. Couchant de Mons is about the only quarter where the Coal demand has not abated.

GERMANY.

Hamburgo, Feb. 5, 1884.—Iron.—The attempt to maintain the price at 125 marks for Merchant by coalition, and reduce the output in order to lend strength to this movement, may be very good, and, indeed, it would be an excellent measure if all kept their word strictly, but there are in Rhenish Westphalia so many whose financial requirements compet them to sell, that it will be difficult to enforce rigidly the agreement. Sheet from still enjoys a good demand, but from Wire remains neglected under a diminished inquiry for America. Steel works have continued to do well; large orders for Rails and other material have been given by the Baden Railroad. The Silesian rolling-mill owners' combination is in a fair way of dissolution, since three of the largest makers have ceased to belong to the compact. As the Hegenscheldt, Tielewinckler and Borsig have their hands free, it is useless to attempt keeping up a combination. Fig iron is in a very bad way in Upper Silesia, the demand for Poland being slack. Great stimulus had been given to export thither before the higher duty became operative in Russia with the commencement of the new year; now that it is levied the demand has ceased. This will at least have one good effect—that of establishing a better proportion between Pig and Finished. Meanwhile rolling mills have reduced their production very much in Upper Si-(Borsenhalle.)

lesia; a great drop in Pig Iron seems, therefore, to impend in that region. *Metals.*—Great dullness prevails. Lead is inactive; we quote German, 12.25 @ 12.50, and English, 14.50. Copper is weak; Lake Superior, 75.50. Tin is stagnant at 95 @ 98 marks. *Spetter.*—Nothing transpires in this metal, which may be quoted 15.15 @ 15.50 marks \$\mathbb{v}\$ 50 kg., spot and to arrive.

#### HOLLAND.

ROTTERDAM, Jan. 31, 1884.—Tin.—The Netherland Trading Society has just sold at auction 22,334 Slabs Banca at 51,374 guilders \$50 kg., on an average. The January Tin deliveries in Holland have been 18,361 Slabs, against 14,049 in 1883, and 15,488 in 1882. The stock is 66,306, against 38,696 and 75,599. The price of Banca was at this time last year 57 guilders, and the year before, 67,50

#### AUSTRIA.

Vienna. Feb. 3, 1884.—Iron.—The market so far this year has been but moderately active; there has, however, been a comparatively good demand for Pig Iron, with a slight rise in Gray sorts, while White and Mixed are barely sustained. Quite a favorable feeling manifests itself as regards Merchant Iron for spring and summer futures, but not for spot goods, the trade preferring to await the actual advent of spring ere they lay in fresh supplies. Sheets are weak and have declined ½ florin ½ 100 kg., Hungarian sorts. Rolling mills receive a steady current of moderately-sized orders, but big ones are scarce. Locomotives at the last adjudication went at 30,800 florins; our makers cannot complain of this figure, considering at what they are now offered from Germany. The Iron market has been quiet: we quote Pig steady in this city at at 51 @ 40; Merchant, 115 @ 130; Sheets, 170 @ 105, and Beams, 140 @ 145 florins \$\overline{v}\$ ton. Metals have fluctuated a good deal, in sympathy with London, but, on the whole, the tendency has been a weak one, on the theory that production is larger in most of them than consumption can absorb.

#### The Allen Portable Pneumatic Riveter.

We illustrate in the accompanying cut a new style of portable pneumatic riveter, made by the Allen Portable Pneumatic Riveting Machine Company, of New York. The latest form of this riveter was patented but a few months ago, and already a number of them are in satisfactory operation. The jaw frames of these machines, which are made in two sizes, will straddle girders or beams having 6-inch angle irons on each side, and 25 and 35 inches deep respectively.

and telegraph wire. The company have now on their books \$200,000 worth of unfilled orders.

The New Jersey Steel and Iron Works, at Trenton, resumed operations on February 11. The chain department, however, is idle, owing to a strike.

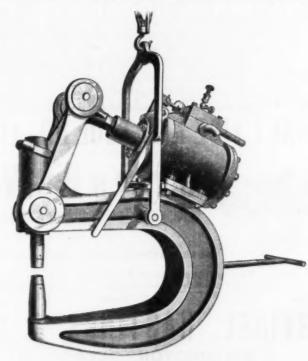
#### PENNSYLVANIA.

Messrs. Witherow & Gordon, of Pitts-ourgh, send us the following communication "In your issue of February 7 we notice the excellent working of the Sheridan Furnace under the management of Charles I. Rader; but we take exception to the statement therein made, that this record is crowding that of furnaces equipped with fire-brick stoves. Last week the No. 2 Furnace at Colebrook, Lebanon County, made a product

as ionows:						
	No. 1.	No. 2.	No. 3.	Mot'l'd.	Tot'l.	
				Tons.		
Sunday, Feb. 3	59	8	14	16	88	
Monday, Feb. 4	. 75	18			88	
Tuesday, Feb. 5	40	87	27		104	
Wed., Feb. 6	72	81			104	
Thursday, Feb. 7.	17	81	27	27	102	
Friday, Feb. 8	28	6	47	25	100	
Saturday, Feb. 9			70	48	112	
Total for the v	week				702	

The consumption of fuel was 2587 pounds to the gross ton of pig iron, or at the rate of 1.155 tons of fuel to I gross ton of pig iron. This furnace is 14 feet bosh and has a working hight of about 70 feet. It is equipped with three 18 x 55 foot modern Whitwell fire-brick hot-blast stoves, and uses a temperature of blast ranging from 1400° to 1700° F. This was the 65th week of its blast, and the average product for the entire blast was 520½ tons. The average for the first six weeks of this year was 560½ tons, showing a very considerable improvement on even the very high and exceptional record of the Sheridan, produced by the use of the cast-pipe stoves.

The Gautier Steel Department of the Cambria Iron Company, of Johnstown, suffered no inconvenience whatever from the recent floods in that section of the State. At one time they were seriously threatened by an ice gorge which formed just above the mills



The Allen Portable Fneumatic Riveter.

With 6-inch angle irons fastened on each side at the edge of the girder, the small machine will straddle the angle irons and reach 20 inches, while under the same conditions the large machine will reach 30 inches; they are thus particularly adapted for use in riveting plate girders. Reference to the cut will show the main features of its construction. The piston-rod connects to levers of different lengths, forming a toggle joint, the lower ends of the longer levers joint, the lower ends of the longer levers being attached to fixed centers on the frame, while the end of the central short lever is attached to a dolly-bar, into the lever is attached to a dolly-bar, into the lower end of which the head die is screwed. The dolly-bar has a stroke of 3½ inches, and the machines are made of sufficient strength to operate on 1-inch rivets. It may be seen by the above description of this riv eter that its construction is such that it acts in a direct line with the axis of the rivet.

#### INDUSTRIAL ITEMS.

#### MAINE.

The new ax factory building, at St. Stephen, is 100 x 35 feet and two stories. The concern turns out about 10 dozen axes a day, and expects to increase its production largely before long. Its chief market is in the Maritime Provinces, but the fame of the axes has spread all over the Continent, and frequently orders are received from many of the Western States and British Columbia

#### MASSACHUSETTS.

The Betts Ready-Made Wire Fencing Company, at Palmer, have just begun operations. They will produce 22,500 rods of fence per

The Chase Turbine Manufacturing Com pany, at Orange, have moved most of their machinery into their new shop. The iron work will be mostly done in the new shop, while the woodwork will be done in the old one. Both water and steam will furnish motive power, and so located that both can be united in one or both shops at the same

The wire company, at Palmer, turned out 3000 tons of iron and steel wire last year, valued at \$400,000. About two-thirds of the valued at \$400,000. About two-thirds of the product was steel wire, and one-third of the whole was galvanized. A large proportion of the whole product was used for telephone

Joseph P. Reed & Co., of 261 South Fourth street, Philadelphia, have admitted into their firm Mr. Charles B. Richardson, and will continue their business as heretofore at the same address.

At West Middlesex, the Middlesex Rolling Mill, Fannie Furnace and the chain works were compelled to shut down during the high water last week. The Chesapeake Nail Works of Chas. L.

Bailey & Co., Harrisburg, were flooded last week and were forced to suspend operations. The Scott Foundry, at Reading, is being run to its fullest capacity. A new 20-foot fly-wheel is being placed in position.

Creveling, Miles & Co., of Danville, pro-prietors of Chulasky Furnace, have pur-chased the old Roach Furnace at that place

and will put it in operation. Arrangements have been completed with the creditors of Blain Bros., Huntingdon, which will enable that firm to resume opera-

tions in a few days. According to the Steelton Item, there is According to the Steelton Item, there is cheering activity in every department of the steel works of that place. Fires have been kindled in No. 3 Furnace; two turns have been put to work in the new merchant mill to enable the management to keep pace with the rapid inflow of orders; in short, everything about the works is reported as looking. thing about the works is reported as looking

bright and promising. P. L. Kimberly & Co. inform us that there is no truth in the report that W. L. Scott & Co., of Erie, are negotiating for their Greenville mill.

Last week, at a meeting of the leading business men of Uniontown, it was decided to build a plate and nail mill, the company to be called the Uniontown Rolling Mill It will be a limited

Febr

ting extra t Copper lottoms, c

Neill's 1 7 in., 1 16 and 16 oz. (And 16 and 16 oz.

Co BRASS

Lined Pip

# WHOLESALE METAL PRICES, February 20, 1884.

(For Wholesale Hardware Prices, See Pages 31, 32.)

1111022011	
	(For
METALS	
HON.—DUTY: Bars, 8-10¢ to 11- sided that no Bar Iron shall pay a le than 35%. Sheet, 11-0¢ to 15-10¢ № 7 and Scroll, 1¢ to 14-10¢ № 7b. Railro- ing more than 25 № 9 yard, 7-10¢ of	ad Bars weigl
Foundry No. 2. P ton Gray Forge. P ton	\$20.50 @ 22.0 19.00 @ 20.0 17.50 @ 18.5
SCORCIA REGIS.	
Carnbroe P ton Coliness P ton Shotts P ton Glengarnook P ton Gartsherie P ton Summerlee P ton Summerlee P ton Summerlee P ton	22.30 (6 22.3) 22.00 (6 22.3) 21.75 (6 23.0) 22.25 (6 22.3) (6 21.3)
Eglinton W ton Clyde W ton	@ 20.5
Steel, at Eastern mills	\$1.00 (g) \$6.0
Wagneht, 19 ton, from yard	. 22.40 @ 23.0
Bar Iron from Stor	·e.
Common Iron: 3i to 1 in. round and square 1 to 6 in.x3i to 1 in	n 2 @ 2.10
Refined Iron: 54 to 2 in. round and square 54 to 6 in.x 54 to 1 in 1 to 6 in.x 54 to 1 fn  P 1 Rods—56 and 11-16 round and sq  Bands—1 to 5x3-16 to No. 19  Bands—1 to 5x3-16 to No. 19  Date 1 Iron base nuice.	b 2.15 @ 2.50 b 2.40 @ 2.50
Rods—9a and 11-16 round and sq. 11 Rands—1 to 5x3-16 to No. 12	b 2.80 @ 2.40 b 2.60 @ 2.70 19 b 8.1 ce 19 b 2.7
Norway Nail Rods	534 @ 534
Common	
America Nos. 10 to 16.	0e 4 e 4 e 414e 414e le 414e 214e 434e
Head	6 6 6 6 6366 6 7 6 6 7366 6 8 6 6 B. 9166

American Russia. ... P D 1046 B, 9468 Russia. ... P D 132 d 144 American Cold Rolled B. B. ... P D 5346 @ 76 Iron Wire. See Wire.

STEEL. Duty: Ingots, Bars, Sheets, &c., valued at 46 P B or less, 45 ad, val.; valued above 64 and not above 76 D, \$2 B D; valued above 76 and not above 106 P D, 2346 P D; valued above 106 P D, 3446 P D; Extrus.—Steel Bars, Rods, &c., cold hammered or polished, in any way in addition to ordinary hot rolling. 1446 P B in addition to above; Steel Circular Saw Plates, 16 P B in addition to the above.

American Cast Steel.

American Cast Steel	ı	in addition to the above.		
East Cast.   P D 1546     Extra Cast.   P B 1616     Circular Saw Plates   P B 1616     Circular Saw Plates   P B 1616     Cound Machinery, Cast   P B 1616     Swaged, Cast   P B 17     Est Double Shear   P B 17     Elister, 1st quality   P B 18     Elister, 1st quality   P B 18     Elister Seat   P B 1616     Elister Seat   P B 1616	ì	American Cast Steel.		
East Cast.   P D 1546     Extra Cast.   P B 1616     Circular Saw Plates   P B 1616     Circular Saw Plates   P B 1616     Cound Machinery, Cast   P B 1616     Swaged, Cast   P B 17     Est Double Shear   P B 17     Elister, 1st quality   P B 18     Elister, 1st quality   P B 18     Elister Seat   P B 1616     Elister Seat   P B 1616	l	For American Steel, see Pittsburgh quota	tic	ons.
Extra Cast.	ı	English Steel.		
Extra Cast.	í	Rest Cast	ID	1516
Circular Saw Plates	ı			
Round Machinery, Cast 9 to 17 Swaged, Cast 9 to 17 Best Double Shear 9 to 151/6 Blister, 1st quality 9 to 13 Carron Steel Reset 9 to 10	ı	Circular Saw Plates	100	10
Swaged, Cast  Best Double Shear  Blister, 1st quality  Company Steel Rest  D 131  Company Steel Rest  D 10	ı	Pound Machinery, Cast	14%	37 1
Best Double Shear W D 1378 Bister, 1st quality W D 10 Common Steel Best W D 10	ı	Cararrad ( But	123	2.0
Blister, 1st quality		Post Double Shear	IES:	312543
		Ristor 1st quality	23.7	TO A
an quanty So to 8		2d quality	100	39

Cast Steel, 1st quality.

3d quanty	TW	Chan	to Thomas	non and I	Corne
TINDUTY :	Plat	tes, snee	ing from	ter war a	e de mo
Ic w to : Bars Banca	, Bic	CK WHU L	iga iree	10 0	91146
Banca			20	B 90 @	21 €
Straits			39	10 60	21 €
English			50	B @	99 d
Cha	ree	al Tin	Plat	es.	
I C 10x14 { 225 s	heet	6	wood .	\$5.75 @	\$6,50
f C 20x28, 112	44		0-6	12.00 @	18.50
IX 10x14   295 IX 12x12   295	0.6		94	7.25 @	8,00
1 X 14x20, 112	0.6		6.0	7.25 @	8,00
D C 1816x17, 100	6.0		64	@	6,00
D V 1914v17, 100	6.6		6.6	@	7.50

D X 1256x17, 100 " For each additional X add "	@	7.50 1.50
Coke Tin Plater Best.	ordin	ary.
1 C 10x14 t \$5,50	\$5,00 @	-
C 10x10		5.8716 7.75 10.75

Terne P	d. quality	P (	Coke.
I C 14x20 M. F. @ \$7.75 I C 14x20 \$5 25 @ \$5.3736	\$5.25	85	@ \$5.25
X 14x207.00 @ I C 20x2810,75 @	10.50	10.00	@ 10 25
IX 20x2814.00 @ IC 20x30013.50 @			
Tin Boller	Distan		

Copper, 80 W fb. Manufactur	nd	Ingot.	dir	: 0	bid all	
articles of which Copper is a co	omp	onent	of	ch	ief	
value), 35 s ad valorem. Ingot, Lake	10 th	1516¢	a	16		
Ingut. Baltimore	66	14540	6	149	40	6 x 8
Braziers' Copper, ordinary sizes,	6.6		0	23	¢	11 x 14 18 x 29
Braziers' Copper, ordinary sizes, under 16 oz. and over 12 oz. ?						15 x 36
sq. ft. Braziers' Copper, 10 oz. and 12	6.6		0	25	¢	26 x 28 26 x 86
02. 1/ 80. ft	66				*	80 x 52
Lighter than 10 oz. W sq. ft Circles less than 84 in. in diam	66				0	30 x 56
" 81 in. diam. and over Segment and Pattern Sheets	65		0	29	0	34 x 58 36 x 60
is and rattern Sheets			900	200	7	

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	" 81 in. diam. and over	0.5		0	29		
	Segment and Pattern Sheets	46		Gr.	36	- 6	13
	Locomotive Fire-Box Sheets	0.0				0	1
	Sheathing Copper, over 12 oz. W			-			1
	. 8q. ft	8.6		0	21		1
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	Nickel Plated Sheathing	6 0		0	86	0	13
Ų		4.6					13
	Plating extra	6.6	25 €		88	.0	13
	Flat Copper Boiler Bottoms or Pit		- ,	-	-	*	13
	Bottoms, cut to special sizes	6.6		0	24	0	
	Tinning.						1
	lixis, by the case			she	et,	84	1

lixs, less than case	3.60
For tinning both sides, double the above amount of Neill's Patent Planished CopperN	nt.
14x48	DL.
Ill and 16 on and brandon did Do the same to the	84¢
12 oz. and lighter	87¢
Boiler Sizes.	-

	Bouer Sizes.
14 and	7 in., 14x59. 8 in., 14x56. 9 in., 14x60. 16 oz. and heavier, 37¢ By the case. 16 h 36¢
12 DZ	16 oz. and heavier
100	11 424
	Copper Wire, -(See Wire.)

Copper wire. (See wire.)
Sheathing Metal.
llow Sheathing Metal, P D
BRASS AND GERMAN SILVER.
Old English Gauge the Standard for Wire
Manufacturers' Price List, January 17, 1884,
dis. 10 @ 20 %

Brass M.	anuf	acti	ire	ra'	Pri	00	List,	Janua	ry 17, 1884
LEAD	Th.	***	***				400 60	di	8. 10 @ 20
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	Compositio	n, white Tripo	<b>13</b>		.1
00	Sulphate ar	nd Ammonia		. 65	.4
10	Nickel, Chlo	oride			1.0
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5	Cookson			12 @	1214
15 60	SPELTE	R-Duty : Pigs	s, Bars and	Plates	\$1.5
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e					
7	Scotch and	Extra Patterns.			8

HABBITT METAL.  N. P. U	ra Patterns.	3
N. P. U		
Nos. 00 to 9, 10, 11, 12, 13, 14, 15, 16, 17, 10  Bright Market Wire		0 7360
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Charcoal		
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Grape Wire, Nos. 10 to 14 )  Bessemer Steel Wiredis. 55 @ 60	Viredis 60 @	65 5
" Bessemer Steel Wiredis. 55 @ 60	Wire	65 5
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" Bessemer Steel Wiredis. 55 @ 60 %
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" Bale Wire, Nos. 7 to 12. dis. 521/9 @ 58 #
Galvanized Market Wire 1 at and a role of
Galvanized Market Wire
Stone or Weaving Wire.
Nos 16 17 18 19 30 21 22 23 24 25 26
Cents 14 15 16 19 20 21 22 23 24 25 26
Nos 27 28 29 30 31 32 33 34 35 36
Cents 28 29 30 32 33 35 37 40 45 55
Nos. 16 to 18dis. 60 @ 65 \$
19 to 26 " 6216 @ 6716 \$
27 to 36 " 65 @ 70 s
Galvanized Stone Wire " 471/4 @ 521/4 %
Steel Wire.
Cast Steel, Steel Wire listdis. 50 \$

Cast Steel, Steel Wire	list		dis. 50 \$
Brass and	d Copper	Wire.	
Old English Gauge	the Standard	d.—Dis 1	
	Common		Gilding Bronze
	High	Low	and
III Was to We 10	Brass	Brass	Copper.

		Brass	Brass	Copper.
All	Nos. to No. 16.		271	coppe.
in	clusive	20.23	\$0.26	\$0.30
No.	17 and 18	. 22	.97	.81
8.6	19 and 20	.24	.99	.82
66	21	.25	.29	.88
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**	23	.28	.32	.36
6.6	24	.80	94	.88
6.6	25		.86	.40
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44				.46
44	28	.42	.46	.51
66	29	. 45	.49	.54
66	80	.48	.52	.62
	81	.51	.55	.07
6.6	32	.55	.59	.78
6.6	88	.59	.68	.82
6.6	84	.64	.68	.95
6.6	85	.70	.74	1.80
6.6	86	.76	.80	1.50
6.6	87	1.00	1.04	1.70
4.6	38		1.34	2.00
6.6	89	2.00	2.00	8.25
46	40	2.60	2.60	5.75

10 2.00 2.00 5.73
Spring Wire, 2 cents per pound advance. Whit-
ened Wire, 3 cents per pound advance. Flat, Square
and Half-Round Wire, 4 cents advance on Round
Wire. Fancy Wire, not less than 10 cents advance on
Round Wire. Spooling on one-pound Spools, 12
cents per pound extra. Spooling on ten-pound
Spools or more. 2 cents per pound extra.

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Iron and Tinned, new list, Dec. 10, 1881 dis. 45 \$
In bulk, new list, Dec. 10, 1881dis. 40 \$
Copper Rivets and Burrsdis.45 @ 50 \$
Nos 7 8 9 10 11 12 18 14 15
\$8 B 40¢ 50¢ 52¢ 54¢ 56¢ 58¢ 60\$ 65¢ 70¢
Stove Bolts.
American Screw Co.'sdis. 60 \$
R. B. & Wdis. 50 x

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...... \$18.50 \$11.50 \$10.75 \$10.25

14.00
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Sizes above—\$15 per box extra for every 5 inches.
An additional 10 per cent, will be chared for all filess more than 40 inches wide. All sizes above 52 inches in length, and not making more than 81 united inches, will be charged in the united 84 mches bracket.

Discount, 70 and 10 to 75.

## PAPER STOCK, &c.

(Dealers'	Selling	Prices.)		
			Cents	# B.
White Shirt Cuttings.	No. 1		7 66	756
α α	No. s		536.68	6
Mill Assorted Whites			554 @	556
Unbleached Muslims			614 @	614
City Whites, No. 1			496 @	436
New Canton Flannels			- 6	634
New Seconds, light			354 @	356
a dark			254 @	3
No. 2 Whites			252 6	256
Cotton Canvas			454 @	436
Linen Canvas No. 1			416 @	454
Beconda, City No. 1			135.00	194
Seconds, City No. 2			1 6	154
Colors, # cwt			70 6	90
Maniia Hope			396 @	356
" Tarred			275 @	294
Gunny Bagging No. 1			136 @	3
No. 8			136 6	186
Kentucky Bazging			4 0	111
Buriap Bagging No. 1			214 60	256
Tar Shakings	*********	1010000 #2	196 @	3
Homp Twine Stock			4 3	434
Hard White Shavings,	No. 1		386	4
floft White Shavings, N.	0. 1	********	317 6	244

White Shavings, No. 2, Soft	286 @	2
Mixed Shavings, part White	256 @	- 3
Ledger and Writing	3 @	No testina
	254 @	2
Book Stock, No. 1, light	1 @	1
Old Newsbapers	1 @	3
Pure manuas	194 @	
Bogus Manilas and Hardwares	94 @	1
Commons, per 100 lbs	60 @	20
Binders' Board Cuttings	34 6	1
Straw Board Cuttings, @ cwt	70 @	70

ı	74
	PAINTS, OILS, &c.
	Black Lamp - Coach Painters
1	Bue, Prussian, fair to best
1	" Ultramarine
ı	Brown Spanish. 114 " Van Dyke 10 @ 12
1	" " in oil
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I	" Ground in oil, Bright Red " ole
ı	Bed " 516
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	Mineral Paints   2 @ 4
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1	West Virginia

	Fish Oil Pressed
1	Pish Oil, Pressed19-5
1	Neatsfoot
1	Tallow
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1	Eagine Sundries.
ı	Sundries.
ı	Asphaltum, Cuban 61/4 @ 91/
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ı	Benzine
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ı	Shellac, English
ı	Licharge dark
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ı	Mineral Wool, ordinary, per lb
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Pumice Stone, selected Lumps.
Pine Tar, bbis.
Pitch.
Putch, in bladders.
in bulk

M &	1 N \$2.60 @ \$2.50 \ \$3.00 \ \$3	30
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	INTERCHANGEABLE	
	INTERCHANGEABLE	
	INTERCHANGEABLE LOCK-COPNER SHELF BOXES, Screw Cases, &c.,	
	INTERCHANGEABLE LOCK-COPNER SHELF BOXES.	



S. H. GREEN,

The only adjustable Wire Cloth Sieve made. It will take out good seed from the refuse of windmills that cannot be cleaned by any other process. Can be adjusted to many different size and shaped meahes. No. 1 Sieve will separate Plantain, baisy, Buckhorn. Wild Carrot, &c., from Clover Seed. Hea Top and Plantain from Timothy, and Timothy from Clover Seed. No. 2 will separate Pyc. Cheat and Cockle from Wheat. No. 3 grades Peas. Beans and Corn. Indoned by Hiram Sibley & Co., D. M. Forry & Co., D. Laudroth & Some, Plant See Co., Henry & Dreer, J. M. McGuller, C. C. Henry & C. Preer, J. M. McGuller, C. S. Agricultural Dept., Washington, Breck & Sons, U. S. Agricultural Dept., Washington, D. C. Write for Prices and Discounts to

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WROUGHT IRON STEEL FACE
(P. W. PATTERN.)
"FULLY WARRANTED."



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GARDNER'S 1881 Razors,

#### R. HEINISCH'S SONS'

Celebrated Tailors' Shears, Trimmers, Scissors, &c., Japanned and Nickel-Plated.

Every pair warranted.

GEO. WOSTENHOLM & SON'S, WADE & BUTCHER'S Pocket Cutlery and Razors.

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NEW ENGLAND CUTLERY CO.'S Table Cutlery.

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GUNS AND PISTOLS, ARMS AND AMMUNITION

# THE LOCKIE HORSE SHOE PAD.



Patented June 1, 1880, and May 24, 1881.

The LOCKIE PAD has received the unanimous indersement of all the leading Horsemen, Liverymen, Horseshoers and Veterinary Surgeons of Chicago and the Northwest.

#### SPECIAL DISCOUNT TO THE RETAIL HARDWARE TRADE.

Full directions furnished for putting on the Pads. Address all orders and communications to

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# MONTGOMERY & CO.

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Stubs' Files, Tools and Steel, Grobet Swiss Files,

Hubert's French Emery Paper, Horseshoe Magnets, &c. wm. SMITH & SON'S CELEBRATED MUSIC WIRE, Nos. 2 to 30. French Sheet Steel, 3 1-4 in. wide, from 4 to 65 thousandths.

Machinists', Silversmiths', Jewelers', Die Sinkers' and Sewing Machine Manufacturers' Supplies.

PATENTED IMPROVED

Double Speed Indicator.

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GEO. W. MONTGOMERY.

105 Fulton St., NEW YORK,

46 South Street, New York,

# BEST OAK BELTING

Elizabethport Steam Cordage Co.,
MANUFACTURERS OF MANILA, SISAL AND TARRED

CORDAGE OF ALL KINDS.

The Wheeling Intelligencer reports the Benwood Iron Works, \$15,000

OHIO.

Phoenix Furnace, of Brown, Bonnell & Co., is again in operation, after having been banked for two months

Andrews & Hitchcock, of Youngstown, are now putting in a new Cuyahoga blowing engine at their Hubbard Furnace and expect to have it running in a week or 10 days.

Summers Brothers & Co. are putting in another Cox annealing furnace at their mill at Struthers Station, and are filling large orders for roofing iron.

The Cummer Engine Company, of Cleveland, have increased their capital stock from \$150,000 to \$400,000.

Benwood Furnace, at Martin's Ferry though almost drowned out by the flood, is now running well and making good iron.

The Jefferson Iron Works, of Steubenville, which had a stock of several thousand kegs of nails damaged by the recent flood, tried the experiment of covering the wet nails with wet sawdust while in the pluer. The result was that they came out cleaner than they were before, and a saving was effected

The Haxtun Steam Heater Company, of Kewanee, are to put in their rolling mills a new 16-inch muck train, with balance rolls, which will be run by a 400-horse-power Corliss engine. They are also building several new double gas furnaces in the puddling de-partment, and are erecting eight additional

The works of the Northwestern Horse Nail Company will start up on the 18th inst.

H. W. Hill & Co., manufacturers of hard-H. W. Hill & Co., manufacturers of hard-ware specialties, of Decatur, during the year 1883 mention that they sold 18,66c improved hog ringers, 22,048 old-style ringers, 2518 tongs and 13,770,000 rings, being an increase in nearly all these items over their very large business of 1882.

#### INDIANA.

Dean Bres., of Indianapolis, have recently Dean Brcs., of Indianapolis, have recently furnished a complete set of water works for a large lumber company at Eau Clair, Wis. They have also made a large pump for the Clarksville, Tenn., water works, besides a set of vertical pumping machinery, having a capacity of 1,000,000 gallons per day, for the Citico Furnace, Chattanooga, Tenn.

CONTENTS. Tweddell's Portable Hydraulic Riveting Machine. Illustrated. ..... Metallurgical Notes: A New Method for the Extraction of Seler Wolfram and its Alloys.... Examination of Stationary Engineers in Philadelphía..... Foundry Hydraulies. Illustrated..... Routing Machine. Illustrated..... New Inventions ... A New Clamp. Illustrated ... Competitive Tests for Locomotive Men. Death of John M. Phillips..... Termination of Two Important Suits. New Hardware Articles. Illustrated..... Iron Ore Mining in Eastern Pennsylvania..... The Union Pacific and Steel Rails..... Editorial: Concerted Restriction of Production.... The Ohio Valley Floods ...... The Position of Tin Plates... Ocean Steamship Profits..... The Condition of Business ..... A Noteworthy Policy ...... Mr. Hewitt on the Tariff..... Washington News. ... Trade Report: British Iron and Metal Markets.... 21 Trade and Finance. ..... 21 General Hardware.... ns of the New York Metal Exchange. Metals.... Coal ... Old Metals, Paper Stock, &c... Foreign Trade Movements... Imports..... Exports. Pittsburgh... Chicago Chattanooga Louisville St. Louis . Our English Letter. The Allen Portable Pneumatic Riveter. Illus-

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Industrial Items

The Iron Age Directory

New Publications:

Trade Publications :

Fire-Brick

Metal Prices . . .

New York Wholesale Metal Prices.

uilding in Philadelphia . .

Wilher's Door Hanger. Illustrated . .

chanical Englineers..... Handbook of Electric Telegraphy .

Mathieu Retorts at Vulcan, Mich.

Combined Square and Slitting Shear, Illus-

Transactions of the American Society of Me-

Steam Engines and Mining Machinery

Boston Hardware and Metal Prices...... 44 ALL INFRINGEMENTS

New York Wholesale Hardware Prices..... Philadelphia and Pittsburgh Hardware and

SAP SPOUTS ONLY,

AND YOU ESCAPE

The Shickle-Harrison Pipe Works, following losses in that city occasioned by the flood: Whitaker Iron Company, \$75,000 to \$100,000; Belmont Nail Company, \$2000; Belmont Nail Company, \$2000; Benwood Iron Works, \$15,000. very short time

The Laclede Wire and Fence Company, of St. Louis, have just completed and occupied an addition to their works 100 feet deep, with a frontage of 25 feet. The new building is used as a warehouse and paint shop. The company have also fitted up and occupied a new office on the first floor of their works.

The St. Louis Malleable Iron Company, of The St. Louis Mall-able fron Company, or St. Louis, are building two more new ovens, which will give them ten altogether, putting in new machinery, and making alterations which will assist in enlarging their facilities. To add to the floor space of their works their office will shortly be removed to a separate building, as yet undecided upon.

#### MICHIGAN.

Work is going ahead vigorously on the site of the furnace to be built by the Iron River Furnace Company, near Stambaugh. The company have cleared off a tract of 20 acres for the plant, and a force of men is now employed in excavating for a series of charcoal kilns. About 50 choppers are at work in the woods thereabout, getting out wood to be made into charcoal when the kilns are ready.—Marquette Mining Journal.

#### Shipbuilding in Philadelphia.

In the shipyard of W. Cramp & Sons, at Philadelphia, there are now on the ways in course of construction four iron steamers, which, when completed, will make the total number of this class of vessels built by the firm 243. The building of these four vessels gives employment to 1400 men and turns several acres of land into a vast workshop. The last steamer built by this company, and but recently brought to New York prior to its voyage to San Francisco, is the San Pablo, built for C. P. Huntington, for the Pacific coast trade between Portland, Ore., and San Francisco. She is 350 feet long, 42 feet beam and 30 feet deep. Her construction is solid and thorough, being intended to re-ceive coal shipments, but her model is graceful and suggestive of speed. She will take the place of the Tacoma, lost about a take the place of the Tacoma, lost about a year ago. In the yard itself the most striking object is the towering frame of the H. F. Dimmock, a freight and passenger steamer building for the Metropolitan Steamship Company, whose boats ply between New York and Boston. She is 265 feet long, 4t feet beam and 29 feet hold. Ranged alongside of her the iron ribs of what will be three other steamers extract attention. Only a part of steamers attract attention. Only a part of the skeleton of each has been put in place. the skeleton of each has been put in place. Hundreds of men are at work at these steamers, which are building for the Morgan Line, and will ply between New York and New Oreans. Each is 330 feet long, of 43 feet beam and 33 feet hold. The prospects for a busy spring and summer of vessel-building are considered by the Cramps to be very good. It is said that John D. Spreckles, of the Oceanic Company, the son of Claus the Oceanic Company, the son of Claus Torrent and Unique Steam Pumps.

Spreckels, the Hawaiian sugar king, is now on his way from San Francisco to Philadelphia to order two more vessels for the line between California and the Sandwich Islands. The Cramps built two vessels for this line last year—the Alameda and the Mari-posa—which have shown surprising qualities of speed in the Pacific waters.

It is reported that a steamship company with \$5,000,000 capital has been formed at Phildelphia, in which the Cramps are interested. The intentions of the promoters have not been disclosed, but it is probable that the company will engage in the foreign trade.

At a recent meeting of the Board of Managers of the Franklin Institute it was announced that bids would be asked in the course of a week for the erection of the buildings for the International Electrical Exhibition to be held in Philadelphia. It is proposed to ask the official recognition of the Secretary of State, that other nations may be invited to participate.

The contract for the new bridge to be erected by the New York, New Haven and Hartford Railroad Company across the Housatonic River has been awarded to Jones & Benner, of Philadelphia. The bridge will be 1100 feet long.

#### THE OLD RELIABLE Bissell Carpet Sweeper.



Its mechanical simplicity makes it the favorite with all who have been perplexed by the com-plicated contrivances of other sweepers.

#### BISSELL CARPET SWEEPER CO., 46 Murray Street, New York.

T. W. WILLIAMS, Agent. SEND FOR NEW CIRCULAR

THE MILLER CO.

CANTON, OHIO,





Ohio Farm, Church, School and Factory BELLS. Also very superior strong, soft and clean CASTINGS. If you have failed to get difficult pieces elsewhere give us a trial.

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NICKEL-PLATED PILLARS, NUTS AND CAPS.

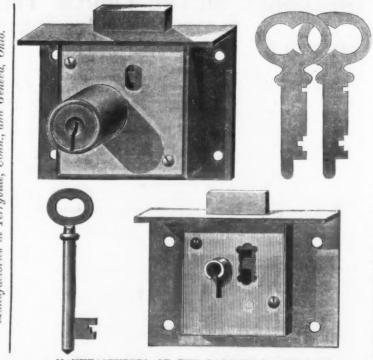
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THE SUCAR MAKER'S FRIEND.

OVER 7,000,000 SOLD TO REPLACE VARIOUS OTHER KINDS Twenty-Five Per Cent. More Sugar and a Better Quality than from any others, is the verdict of over 20,000 Maple Sugar Makers who use them. Their perfect working with satisfaction is guaranteed. every Maple Suger Town not already engaged. Descriptive Circulars, with price list and Sample Spouts, sent free to the trade only. Owing to the unusually heavy orders at this season of the year, it is necessary that all Agents (and those desiring agencies) forward their orders for the coming sugar season as early as possible, to give the required time for supplying all demands, and that shipments by freight can be made so as to reach their destination in due season. In ordering, state distinctly whether to ship by freight or by express. Write immediately for Agency to C. C. POST. Patentee. Rurlington Man Man does

SPOUT NO.
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46	Lathes, Pulley Blocks. Drills.
d, O31	Lathes, Pulley Blocks. Drills. Harrington E. & Son. Philadelphia, Pa
h. N. Y 3	Chadhorne & Coldwell Mfg. Co., Newburg, N. Y37 Mast, Foos & Co., Springfield, Ill
40	Lemon Squeezers.
39	Locks and Knobs.—Manufacturers of. Durrio & McCarty, 97 Chambers, N. ay
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, N. Y 8	Machinery, Adt John, New Haven, Conn.
10	Bliss, E. W., 167 Plymouth, Brooklyn
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7	Mackinery,  Adt John. New Haven. Conn.  Bliss. E. W., 167 Plymouth, Brookiya.  6 Garvin E. E. & Co. 190 Centre. N. Y.  6 Garvin E. E. & Co. 190 Centre. N. Y.  7 Peoriess Punch and Shear Co., 38 W. Dey, N. Y.  7 Petribusph Mfg. Co., Pittsburgh, Pa.  6 Purdy Machine Co., Cleveland, O.  7 Popping J., n. e. oor, 548 st. and 11th Av. N. Y.  7 Stokes & Farrish, Phila., Pa.  8 Stow Flexible Shaft Co., Limited, Philadeiphia.  7 The Stiles & Parser Press Co., Middaetown, Conn. &  Union Foundry and Pullman Car Wheel Works.  Chicago, 111.
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£,	Machinists' Tools and Supplies. Blaisdell P. & Co., Worcester, Blass. 45 Johnson I. H., Jr., & Co., Philadelphia, Pa. 47 King J. M. & Co., Waterford. N. 1 6 Rhode Island Tool Co., Providence, E. I. 33 Seliers Wm. & Co., Phila., and 79 Liberty, N. Y. 47
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Nation         Holes         Holes <t< td=""><td>Norway Shapes, Rollers of. Naylor &amp; Co., 99 John. N. Y Bowland Wm. &amp; Harvey. Frankford, Philadelphia. 18</td></t<>	Norway Shapes, Rollers of. Naylor & Co., 99 John. N. Y Bowland Wm. & Harvey. Frankford, Philadelphia. 18
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b Island Horse Shoe Co., Providence, R. I bberger & Co., Pittsburgh, Pa	Russell. Burdsall & Ward. Port Chester, N. Y48 Standard Nut Co. Pittsburgh, Pa45 Trump Bros. Mach. Co., Wilmington, Del
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row & Gordon, Pittsburgh, Pa	Standard Lighting Co., Cleveland, O
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4 Octive Steel Department of Cambria Iron Cc.

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Stephens Fatent Vise, 11 Dey, N. Y.

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Seneca Mra. Co., Seneca Falls, N. Y. Seneca Falls, N. Y. Vise, 31 Dey, V. Y... Washing Machines, Seaman & Co., Millport, N. J..... Water Coolers, Winchell, Geo. D., Mfg. Co., Cincinnati, O.........39 Cleveland wife
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Wire, Manufacturers or.

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Wire Adode, Manufacturers of Mig. Co., 85 Fulton,

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Northrop A. C. O., Cliff. bes. John & Fuiton, N. Y. 2
Northrop A. & Co., Pittsburgh, Pa...

#### Combined Square and Slitting Shear.

The Niagara Stamping and Tool Company, of Buffalo, N. Y., have just put upon the market a new style of square and slitting shear combined, of which the accompanying illustration presents a very satisfactory idea. As may be seen from the cut, the side cheeks of the machine are formed as a part of the legs, and are so shaped as to form a gap. This gap is 6 inches deep, and the shear blades are 37 inches long; accordingly, iron 3 feet wide is readily cut in this machine. In strength the machine is readily adapted to No. 16 gauge and lighter. The treadle is extensible, so as to adapt it for treadle is extensible, so as to adapt it for cutting various thicknesses of sheet metal. A clamping member, not shown in the en-graving, is provided for holding the sheet upon the bed of the machine while it is being cut. This shear will cut a strip 6 inches know if such information was furnished by wide, or narrower, of any required length. him, and when I return to Detroit I expect

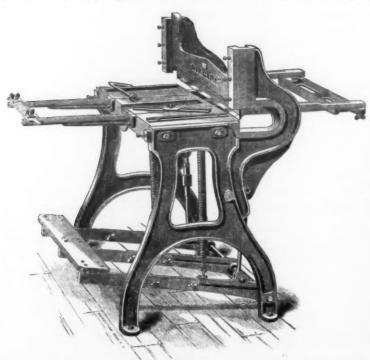
eral use has been made of the electrical text-books and of the literature relating to kindred subjects, and also of the current electrical journals. Numerous illustrations add to the generally attractive character of the work, which, taken altogether, will very probably meet with extended popularity.

#### Mathieu Retorts at Vulcan. Mich.

DETROIT, MICH., February 16, 1884.

DETROIT, MICH., February 16, 1884.

To the Editor of The Iron Age: My attention has been called to a statement in yourissue of the 7th inst. reflecting upon the economical operations of the retorts constructed
at the Vulcan Furnace, Michigan, under my
patents. I have written the manager of the
Vulcan Furnace Company, who is given as
authority for the statements you publish, to
know if such information was furnished by
him. and when I return to Detroit I expect



Combined Square and Slitting Shear, Built by the Niagara Stamping and Tool Company, Buffalo, N. Y.

#### Wilber's Door Hanger.

We show herewith a perspective view of a new barn-door hanger introduced to the trade by J. D. Wilber, No. 150 Dearborn street, Chicago. The entire hanging strap and wheels are made of malleable iron. The

wheels are straight grooved, fitting the square edge of the track both above and below, thus keeping a door perfectly aligned, perfectly perfectly angued, and not allowing it to slide in or out until stopped by rubbing against the rail, which is often the case with flat wheels on a wooden track. The track, as will be seen by reference to the engraving, is an ordinary bar of ordinary bar of iron, such as may be purchased at any store, fastened to



Wilber's Barn-Door Hanger.

beam provided for the purpose. The fact that no special track is required, but that material sold in every hardware store can be utilized, is one of the special advan-tages to which the manufacturer directs attention.

#### NEW PUBLICATIONS.

TRANSACTIONS OF THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS.

Volume IV of the above transactions, giv ing a full account of the New York (1882) and Cleveland meetings of the Society, has been issued. It embraces 440 pages, and is replete with valuable and interesting nutter relating to the various engineering topics discussed at those conventions.

HANDBOOK OF ELECTRIC TELEGRAPHY. By Thoma D. Lockwood. Size, 5% x 9 inches; 377 pager Published by D. Van Nostrand. Price \$2.50.

A general knowledge of the theory of electricity and magnetism is a most desirable and valuable acquirement for all who are in any way connected with the practical application of either science. This, together with the fact that but few of the books written upon the subject are adapted for self-education, makes Mr. Lockwood's work specially valuable. It is arranged in the form of questions and answers, embracing 24 chapters, devoted to frictional, voltaic and thermo electricity, earth currents and earth batteries, electro-magnetism and electro magnets, and the almost numberless details directly connected with the subject. The author has endeavored to put the information in as lucid and concise of the different machines. Tables are also electricity and magnetism is a most desirable the information in as lucid and concise of the different machines. Tables are also form as is consistent with accuracy, and to combine brevity with completeness. A liberal chines, together with a price list of the same.

When used for slitting, the sheet is moved endwise across the machine, allowing several distinct cuts to be made, as may be necessary. The machine, by its capacity for work and general construction, is well adapted to the use of sheet-iron workers generally, and particularly to galvanized iron cornice manufacturers. We understand that the Niagara Stamping and Tool Company have an illustrated circular describing their full line of squaring shears, some of which we have previously illustrated. It is to the interest of all who contemplate buying machines of this kind to learn from it what is available for their purpose.

capacity of 240 cords per day.
J. A. MATHIEU.

#### TRADE PUBLICATIONS.

#### Fire-Brick.

The Troy Fire-Brick Works, of Troy, N. Y., Messrs. James Ostrander & Sons, proprietors, have sent us their catalogue of fire-brick, tiles, blast-furnace blocks, &c. The pamphlet, which is bound in flexible cloth over compresses and an extensive services. cloth cover, comprises some 24 pages, and is illustrated with cuts showing their different shaped bricks and blocks. During the last year this company have been making impor-tant additions to their works, including a year this company have over a manufacture of special and diditions to their works, including a new kiln of very large capacity. In the block department particular attention is paid to the manufacture of special and difficult shapes; they also endeavor to keep on hand a supply of special bricks, blocks and tiles used in the construction and repair of Siemens-Martin gas producers and regenerative furnaces. In blast-furnace work Messrs. Ostrander & Sons furnish linings in whole or in part for furnaces, from the smallest charcoal type to those of the largest and most approved anthracite class. The clay from which they manufacture their fire-brick is taken from their own mines at Woodbridge, N, J., which clay, they claim, ranks equal to the well-known Stourranks equal to the well-known Stour-bridge clay, of England. Besides the many kinds of bricks they manufacture, this firm also receive orders for ground fire-clay, ground fire-brick and ground kaolin, the lat-ter being used in the setting of stoves, ranges and heaters. The circular also contains tables in connection with the cuts, giv-ing the various dimensions of the bricks.

#### Steam Engines and Mining Machinery.

We are in receipt of an illustrated cata-logue from the Beckett & McDonald Manufacturing Company, of Arlington, N. J., builders of horizontal and vertical steam engines, hoisting engines, pumping engines, ore crushers and various other mine and mill machinery. This company build stationary engines of from 5 to 115 horse-power; be-sides these, their regular sizes, they are prepared to furnish, on special order, engines of greater power. Their automatic cut-off engines, which they make of from 28 to 125

# D. ROSENBERG & SONS,

134, 736, 738, 740 E. 14th St., NEW YORK.

243 Wabash Avenue, CHICAGO, ILL.

MANUFACTURERS OF JAPANS AND COPAL VARNISHES OF ALL DESCRIPTIONS,

### and **Bronzing** Japans SPECIALTIES.

Our Baking Japans and Bronzing Varnishes are being used by the leading consumers of these articles throughout this country and abroad, and we beg to refer to the following parties as to their superior qualities: Singer Mfg. Co., Elizabethport, N. | Landers, Frary & Clark, New Brit- | Elbell, Gilliam & Co., Canton, Ohio.

J., and Glasgow, Scotland. Wheeler& Wilson Mfg. Co., Bridgeport, Ct.

American Sewing Machine Co., Philadelphia, Pa. St. John Sewing Machine Co., Springfield, Ohio. Medina Mfg. Co., Medina, N. Y.

New Home Sewing Machine Co., Orange, Mass.
Florence Sewing Machine Co.,

Florence, Mass. Sargent & Co., New Haven, Ct. P. & F. Corbin, New Britain, Ct. Stanley Works, New Britain, Ct.

ain, Ct. Eaton, Cole & Burnham Co., Bridge-

port, Ct.
Norwalk Lock Co., Norwalk, Ct.
Bradley & Hubbard Mfg. Co., Meriden, Ct.

Charles Parker Co., Meriden, Ct. Washburn & Moen Mfg. Co., Worcester, Mass.

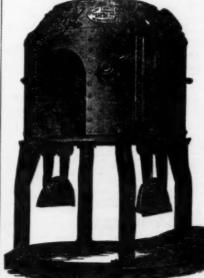
Trenton Lock and Hardware Co., Trenton, N. J. Peck, Stow & Wilcox Co., Southington, Ct., and Cleveland, Ohio. Shurmer & Massey Mfg. Co., Cleveland, Ohio.

Livingston & Co., Pittsburgh, Pa. James Smart Mfg. Co., Brockville, Canada.

Burrows, Stewart & Milne, Hamilton, Canada.
R. M. Wanzer & Co., Hamilton, Can.

Buffalo Hardware Co., Buffalo, N. Y. Sidney Shepard & Co., Buffalo, N. Y. Enterprise Mfg. Co., Philadelp'a, Pa. E. & I. Fairbanks & Co., St. Johns-

bury, Vt.
Buffalo Scale Co., Buffalo, N. Y.
Jos. Barnhurst, Philadelphia, Pa. Van Wagoner & Williams, New York, and many others.



The Most Durable and Best Selling

**Bucket for Chain Pumps**.

#### Colliau **Patent** The

Will pay for itself in one year in the economy of fuel, and will do more and better work than any other.

Write for Pamphlet Showing Results of

COLLIAU CUPOLAS Now in Use by Leading Foundries.

ADDRESS

Foot of Mt. Eillott Ave., DETROIT, MICH.

WILEY & RUSSELL MFG. CO., Greenfield, Mass., MANUFACTURERS OF

TAPER PLUG AND BOTTOMING TAPS.



ALSO THE LIGHTNING AND **GREEN RIVER** 

TOOLS.

SEND FOR PRICE LIST.

#### SHIELDS BROWN, de MANUFACTURERS AND SOLE PROPRIETORS OF **BOILERS**

AND STEAM

PIPES.

Prevents Radia tion of HEAT.



Awarded first and only Prize, Silver Medal, at the late National Railway Exposition. Send for Illustrated Pamphlet, and mention The Iron Age.

CHICAGO.

WATER PIPES. Also Condensa tion of STEAM.

with the second second

GAS

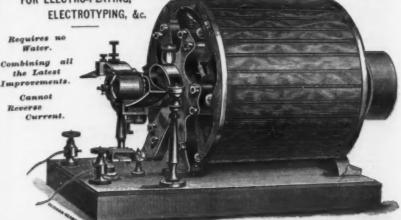
AND

E PAGES

THE WORLD FOR Pattern Making, EMERY BELTS, MORE ECONOMICAL THAN ANY OTHER GUIE SOLD EVERYWHERE ON ITS MERITS MYD BY RUSSIA CEMENT CO. GLOUCESTER, MASS WHEELS, &c., &c. end for Pamphlet.

AWARDED THE GOLD MEDAL AT THE INTERNATIONAL EXHIBITION. London, 1883.

THE AMERICAN DYNAMO-ELECTRIC MACHINE. FOR ELECTRO-PLATING,



THE ZUCKER & LEVETT CHEMICAL CO., Gen'l Agts., Manufacturers and Importers of NICKEL PLATERS' SUPPLIES, 538, 540, 542, 544 & 546 West 16th Street, - NEW YORK.



WILLIAM T. COMSTOCK No. 6 Aster Place, New York,

Publisher of Books for Carpenters, Builders, Painters and Decorators,

AND MANUFACTURER OF BUILDERS' LEVELS.

SPECIAL INDUCEMENTS will be offered to the HARDWARE TRADE to handle these goods. Send for Catalogue and Discounts.

No quotations of Discounts given unless request is accompanied by business card.



Fully Warranted. Only Reliable Spring Made Never Breaks Nor Cives Away.

INDIANAPOLI\*, INDIANA.

Dealers and Agents wanted everywhere.

# Wholesale Hardware Prices, February 20, 1884.

HARDV	VARE
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HARDWARE.
Anvils.  Eagle Anvils American.  Fig. 10 c - dis 20 %  Wright's.  It G 11/40  Armitage's Mouse Hole.  Armitage's Mouse Hole (extra quality)  Trentou.  11/40  Trentou.  10/40  Wilkinson.  11/40  11/40  11/40  11/40  11/40
Armitage's Mouse Hole (extra quanty). 11-5 Trenton
New Haven Copper Co
Cook's Douglass Mfg. Co. dis 40% to 5 Fatent Solid Head. dis 30 % Lewis' Patent Single Twist. dis 30 % Lewis' Patent Single Twist. dis 45 % Russell Jannings' Augers and Bits of all kinds, List of January 1, 1881. dis 45 % Initation Jennings' Bits (old list). dis 48 % Initation Jennings' Bits (old list). dis 48 % Reel Mfg. Co's Jennings' Bits (old list). dis 48 % Senell Mfg. Co's Jennings' Bits (old list). dis 48 % Expansive Bits, Ives S. Solid \$30 % S. Colds 40 % Expansive Bits, Blake's. \$20 & \$20 - dis 40 % Expansive Bits, Blake's. \$20 & \$20 - dis 40 % Expansive Bits, Derby, \$17 and \$26 % dis 40% to 5 Bits 100 Mayers, Ives.
Griswold.  Solies Mg. Co.  Solies Mg. Co.  Solies Mg. Co.  Solies Mg. Co.  Cook's Douglass Mg. Co.  Cook's Douglass Mg. Co.  Cook's Douglass Mg. Co.  Fatent Solid Head.  dis 30 %  Lewis' Patent Single Twist.  dis 40 %  Russell Jannings' Augers and Bits of all kinds. List  of January 1, 1831.  dis 45 %  Initiation Jennings' Bits (old list).  dis 45 %  Initiation Jennings' Bits (old list).  dis 45 %  Initiation Jennings' Bits (old list).  dis 45 %  Expansive Fits, Clark's, small, 816; large, \$20.  Expansive Fits, Clark's, small, 816; large, \$20.  Expansive Bits, Blake's.  Expansive Bits, Blake's.  Expansive Bits, Blake's.  Expansive Bits, Blake's.  Expansive Bits, Derby, \$17 and \$36.  dis 40 %  Expansive Bits, Blake's.  Expansive Bits, Derby, \$17 and \$36.  dis 40 %  Expansive Bits, Derby, \$17 and \$36.  dis 40 %  Expansive Bits, Derby, \$17 and \$36.  dis 40 %  Hollow Augers, French, Swift & Co.  \$4 lis 26 %  Hollow Augers, Bonney's \$4 djust. \$2 ds. \$8.8 dis 25 %  Hollow Augers, Lives Expansive, each \$2. 0 - dis 30 %  Hollow Augers, Lives Expansive, each \$2. 0 - dis 30 %  Hollow Augers, Liversna Adjust. \$2 ds. \$8.8 - dis 25 %  Hollow Augers, Stearns Adjust. \$2 ds. \$8.8 - dis 25 %  Hollow Augers, Donney's \$4 djust. \$2 ds. \$8.8 - dis 25 %  Hollow Augers, Liversna Expansive, each \$2. 0 - dis 30 %  Hollow Augers, Liversna Expansive, each \$2. 0 - dis 30 %  Hollow Augers, Liversna Expansive, each \$2. 0 - dis 30 %  Hollow Augers, Liversna Expansive, each \$2. 0 - dis 30 %  Hollow Augers, Liversna Expansive, each \$2. 0 - dis 30 %  Hollow Augers, Liversna Expansive, each \$2. 0 - dis 30 %  Hollow Augers, Liversna Expansive, each \$2. 0 - dis 30 %  Hollow Augers, Liversna Expansive, each \$2. 0 - dis 30 %  Hollow Augers, Liversna Expansive, each \$2. 0 - dis 30 %  Hollow Augers, Liversna Expansive, each \$2. 0 - dis 30 %  Hollow Augers, Liversna Expansive, each \$2. 0 - dis 30 %  Hollow Augers, Liversna Expansive, each \$2. 0 - dis 30 %  Hollow Augers, Liversna Expansive, each \$2. 0 - dis 30 %  Hollow Augers, Liversna Expansive, each
Double Cut Gimlet Bits, Ivee. dis 50 % torse's Bit Stock Drill.  Holtz Bit Stock Drills dis 20 % dis 15 % Watrous's Ship Augers dis 15 % Watrous's Ship Augers dis 15 % Avi Haita.  Sewing, Brass Ferrule \$3.50 % gross dis 40 % to 7 patent Sewing, Short. \$100 % doz.—dis 40 % to 7 patent Sewing, Short. \$100 % doz.—dis 40 % to \$100 % doz.—dis 40 % d
Patent Sewing, Long. \$1.00 \$10
I Hommedieu's Ship Augers dis 15 % Awis Ship Augers dis 15 % Awi Haits dis 15 % Awi Haits dis 15 % Awis Brass Ferrule \$3.50 % gross—dis 40&10 % Patent Sewing, Short \$1.00 % doz—dis 40&10 % Patent Sewing, Short \$1.00 % doz—dis 40&10 % Patent Sewing, Short \$1.00 % gross—dis 40&10 % Patent Peg. Leather Top \$1.00 % gross—dis 40&10 % Awis, Shouldered Peg % gross \$1.70—dis 26&10 % Awis, Shouldered Peg % gross \$1.70—dis 26&10 % Awis, Shouldered Peg % gross \$2.70—dis 26&10 % Awis, Shouldered Brad % gross \$2.70—dis 26&10 % Awis, Handled Scratch \$7.50 % gross—dis 26&10 % Awis, Handled Scratch \$7.50 % gross—dis 26&10 % Awis, Handled Scratch \$7.50 % gross—dis 26&10 % Awis, Handled Scratch \$1.00 % doz—dis 26&10 % doz 5&10 % doz 5&
A xes.—bos graves.  A xes.
Axie dirense. Keg # B, 5c; Pall, # B 5c net Frazer's, in burks. #gross \$10 co net Axies.—Standard list # Brase # B 5c net Axies.—Standard list # Brase # B 5c net Beits.— and, Light Brase # dis 2026,0 % dand, Extra Heavy # dis 45 % fand, White Metal # dis 6c 5 % fand, White Metal # dis 6c 5 %
Hand   Silver Chime
Frager's, in boxes #gross \$10 on net Axies.—Standard list dis 45
Cow, Common wrought
Beiting, Rubber- Standard dia for
beiting and Packing Co
telling and Packing Co. dis % believes with the believes.  Extension, Barber's. \$\psi\$ dos \$15.00\$—dis a.08.5 \$\frac{1}{8}\$ & \$\text{Extension}\$, \$\text{Free to \$815.00\$}\$—dis a.08.5 \$\frac{1}{8}\$ & \$\text{Extension}\$, \$\text{Free to \$825.00\$}\$—dis a.08.5 \$\text{Disgonal}\$ & \$\psi\$ dos \$824.00\$—dis a.08.5 \$\text{Bind Adjusters.}\$—Domestic. \$\psi\$ dos \$3.00\$—dis s.08.5 \$\text{Billind Fasteners.}\$ \$\psi\$ dos \$3.00\$—dis s.08.5 \$\text{Billind Fasteners.}\$ \$\psi\$ dos \$3.00\$—dis s.08.5 \$\text{Billind Fasteners.}\$ \$\psi\$ dos \$3.00\$—dis s.08.5 \$\text{Van Sand's Screw Pattern.}\$ \$\psi\$ \$\psi\$ gro. dis s.08.2 \$\text{Van Sand's Screw Pattern.}\$ \$\psi\$ \$\psi\$ gro. dis s.08.2 \$\text{Van Sand's Oid Pattern.}\$ \$\psi\$ \$\psi\$ gro. dis s.08.2 \$\text{Van Sand's Oid Pattern.}\$ \$\psi\$ \$\psi\$ gro. net Merriman's. dis s.01 \$\text{Pattern.}\$ \$\psi\$ \$\psi\$ gro. net Salls urg & Austin, No. 2008. \$\psi\$ \$\psi\$ gro. net Sacurity \$\psi\$ varvity. \$\psi\$ per gross. net Hilad Staples. \$\psi\$ and larger. \$\psi\$ do net Bar bed \$\psi\$ in. \$\psi\$ \$\ps
Penfield Block Co., I. R. and I. Strap'd Penfield Block Co., W. I. C. bushed. Penfield Block Co., W. I. all steel roll'r Penfield Block Co., L. & I Sheaves  Sagnall & Loud  dis 40 \$2  dis 20 \$4  dis 40 \$5  di
Cast iron Barrel. Square, &c
Carriage and Tire Common. dis 85 @ 8.25; Carriage and Tire, Philadelphia. new list. dis 702.05; Carriage and Tire, Philadelphia Pattern. dis 702.55; R. B. & W. Carriage (old list). dis 70.55; Tire. Am. Screw Co.'s, Phila., new list. July 2 1893. dis 65; Tire. Bay State." new list. July 2, 1883. dis 65; Tire. B. B. & W., 3:10 and 3/ Philadelphia list. dis 80.57;
Tire. Am. Screw Co.'s, Phila., new list. July 2, 183, dis 75 % Tire. B. & E. W., 3-16 and 3/2 Philadelphia list. dis 8-5, 8 Tire. B. & E. W., 3-16 and 3/2 Philadelphia list. dis 8-3 % BEOVE—American Screw Co.'s dis 6-5 % Stove, B. & E. Mig. Co dis 9-5 % Stove, B. & E. Mig. Co dis 9-5 % Plow, R. B. & W dis 9-5 % Plow, R. B. & W dis 9-5 % Plow R. B. & E. W dis 9-5 % Machine dis 7-62-10 % Bott Ends dis 7-62-10 %
Bering Machines. Upright First quality, no Augers. \$4.50 Phillips, with Augers. 7.00 Jennings & 1/0., no Augers. 5.00 Jennings & 1/0., no Augers. 5.00 Jennings & 1/0., no Augers. 6.75 Baunders' Patent, Regular Bod. \$6.00. 3012  675  675  682  682  683  683  683  683  683  683
Saunders   Patent, Extra Bed, \$6, 50   dis 20 5     Stew   Pine.   dis 60 7     Humason, Beckley & Co.'s, Nos. 1 and 2   dis 60 7     Humason, Beckley & Co.'s other Nos.   dis 60 7     Sargent & Co.'s   \$30,70 and \$21.40, dis 60 65     Sargent & Co.'s   \$30,70 and \$21.40, dis 60 65     Sargent & Co.'s   \$30,70 and \$21.40, dis 60 65     Sargent & Co.'s   \$30,70 and \$21.40, dis 60 65     Hotchkiss   W. Co.   dis 90 61 5     Petc., Stow W. Co.   dis 90 61 5     Petc., Stow W. Co.   dis 90 61 5     Barbard's Patent   dis 60 62 5     Hotch Braces   dis 50 63 64 6 5     Common Ball (American)   dis 55 5     Amidon's   dis 55 8     Barker's Imp'd   dis 55 8     Empire   dis 50 8
Amidon's die so 8 Barker's imp'd die 5 8 Empire die 3 8 Empire die 3 8 Euffalo Ball die 5 8 Brackets Bielf, plain die 5 6 7 Ender fancy die 5 6 7 Ekcading, Plain die 5 6 7 Ekcading, Plain die 5 6 7 Ekcading, Rosette die 5 8 Bright Wire Goods.
Amidon's imp'd. dis 50 garker's imp'd. dis 50

	olosalo Ilalum	(For Wholesale Metal Prices, See P
	Fast Joint, Narrowdis 40&10&10 \$ Fast Joint, Broaddis 40&10&10 \$	Door Santage
%	Fast Joint, Broad  dis socioco lo Loose Joint, Japanned  Loose Joint, Japanned  Loose Joint, Japanned  Loose Joint, Japanned with Acorns  Loose Joint, Japanned with Acorns  Loose Joint, Japanned with Acorns  Loose Pin, Acorns  Loose Pin, Acorns  Loose Pin, Acorns, Japanned  Loose Pin, Acorns, Japanned  Loose Pin, Acorns, Japanned, Plared Tips  Fast Joint, La. Narrow  Fast Joint, Broad  Loose Pin, Wrt  Loose Pin, Wrt  Loose Pin, Wrt  Jose Jose Joint, Broad  Loose Pin, Wrt  Jose Joint, Broad  Loose Pin, Wrt  Jose Jose Joint, Broad  Loose Pin, Wrt  Jose Jose Joint, Broad  Loose Pin, Wrt  Jose Jose Joint, Broad  Jose Joint, Broa	Doer Springs     Correy's Rod, regular size, # doz. #3
00000	LOOSE PIn, ACOTES	No 2. Medium, Japanned # dos 2.75 \ dis 50 & 10 \$ No. 2. Small, Japanned # dos 2.00 \ star (Coll)—For Cop'd, Nickel-Plated &c., see list. No.4 ("Shoo Fly") Screen door size, # doz \$1.50
N.N.	Fast Joint, Lt. Narrow   dis 60&256	No. 6, Medium # doz 2.75 Ne. 7, Large # doz 4.00 Sabin's Lever No. 1, \$1, 2, \$1.50; 3, \$2; 4, \$2.50, dis 35 %
	Inside Blind Regular   dis 60&256     Inside Blind, Light   dis 60&256     Loose Pin, Wrt   dis 60&756     Loose Pin, Light   dis 60&256	Sabin's ("rown
	Bronzed Wrought Butts dis 40% 5 Spring Hinges: Geer's Spring and Blank Butts dis 5 Sabin Mig. Co. 2 Double Acting dis 5 Sabin Mig. Co. 3 Double Acting dispersion	Hercules dis 40 % Drawing Knives. dis 40 % Arlington Edge Tool Co. dis 70 % of the fact of
N 26	Union Spiral Spring, Japanned dis 25 % Union Spring Hinge Co.'s dis 25 % American Spring Hinge Co.'s dis 36 % Gem Spring Hinge dis 36 %	Merrill
AK WA	Barker's Double Acting	Witherby Tool Co. dis 70 % Douglass. dis 70 %  Orlits and Drill Stocks. Blacksmiths' seeh 8 ro dis 20 %
M. W. S. W.	Empire.   dis 50&10 %	Blacksmiths' Self-Feeding
** *	Blind Butts, Palmer   dis 50&10 %	Breast, Millers Falls   each, \$3 00, dis 25 5
5. 5. 5. 5. 5.	Blind Butts, Huffer dis co 9 Blind Butts, Clark's, Nos. 1, 3, 5	Ratchet, Whitney's
ちただだ	Blind Butts, Sargent's, No. 12. dis 70&10 % Blind Butts, Reading's Gravity. dis669&10 % Blind Butts, Shepard's "Noiseless," Nos. 0, 60, 65, 45 and 55. dis 70 %	\$12.00. dis zc&10 % Wilson's Drill Stocks .dis 10 % Automatic Boring Tools .each, \$2.25, dis 20 % Drill Chucks.
気気気を	Loose Pin, Wrt. dis 6027/6 s Loose Pin, Light dis 6027/6 s Bronzed Wrought Butts dis 6022/6 s Bronzed Wrought Butts dis 6022/6 s Bronzed Wrought Butts dis 6025/6 s Spring Hinges: deer's Spring and Blank Butts. dis 30 s Sabin Mig. Co.'s Double Acting dis 35 s Union Spring Hinge Co. S. dis 25 s Union Spring Hinge Co. S. dis 25 s Gem Spring Hinges Co. S. dis 25 s Gem Spring Hinges Loc S. dis 25 s Gem Spring Hinges Loc S. dis 25 s Gem Spring Hinges Loc S. dis 25 s Burker's Double Acting dis 30 s Gem Spring Hinges dis 30 s Gem Spring	Automatte Borting Tools
M. W. W. W. W. W.	2½, 3	10ver
N 2.4	Beatty's	Acme. #gross, siz.co., net Acme. #gross, siz.co., dis 25 Friumpn (T. & S. Mfg. Co.). #gross, \$iz.co., dis 25 Friumpn (T. & S. Mfg. Co.). #gross, \$iz.co., dis 25 Helevator Buckets, sizht. 32 fo 10 in. (Duc's Improved). # 100, \$iz. to 60 \$iz. to. dis 10 \$
**	Can Openers.—Messenger's Comet, \(\psi\) dos. \$3.00. \(\delta\) is gross \$6.00, dis 25 \(\delta\)	# 100, \$15 00 @ \$54.00
黑黑黑黑	Lyman's # doz \$3.75, dis 20 \$ No. 4, French # doz \$2.25, dis 55 \$ No. 5, Iron Handle # gross \$0 on, dis 30 \$ Eureka	Emery.—Regular numbers
***	Sardine Scissors	Rettles
X X	### ### ### ### ### ### ### ### ### ##	Mill E. Buckets, heavy 5 to 10 in (Duc's Improved),  y dos. \$2.00 @ \$1.00.0 dis 10 \$ \$torehouse (Duc's Patent), 12 to 17, \$12 @ \$20. dis 10 \$ \$torehouse (Duc's Patent), 12 to 17, \$12 @ \$20. dis 10 \$ \$torehouse (Duc's Patent), 12 to 17, \$12 @ \$20. dis 10 \$ \$torehouse (Duc's Patent), 12 to 17, \$12 @ \$20. dis 10 \$ \$torehouse (Duc's Patent), 12 to 17, \$12 @ \$20. dis 10 \$ \$torehouse (Patent), 12 to 17, \$12 @ \$20. dis 10 \$ \$torehouse (Patent), 12 to 17, \$12 @ \$20. dis 10 \$ \$torehouse (Patent), 12 to 17, \$12 @ \$20. dis 10 \$ \$torehouse (Patent), 12 to 17, \$12 @ \$20. dis 10 \$ \$torehouse (Patent), 12 to 17, \$12 @ \$20. dis 10 \$ \$torehouse (Patent), 12 to 17, \$12 @ \$20. dis 10 \$ \$torehouse (Patent), 12 to 17, \$12 @ \$20. dis 10 \$ \$torehouse (Patent), 12 to 17, \$12 @ \$20. dis 10 \$ \$torehouse (Patent), 12 to 17, \$12 @ \$20. dis 10 \$ \$torehouse (Patent), 12 to 17, \$12 @ \$20. dis 10 \$ \$torehouse (Patent), 12 to 17, \$12 @ \$20. dis 10 \$ \$torehouse (Patent), 12 to 17, \$12 @ \$20. dis 10 \$ \$torehouse (Patent), 12 to 17, \$12 @ \$20. dis 10 \$ \$torehouse (Patent), 12 to 17, \$12 @ \$20. dis 10 \$ \$torehouse (Patent), 12 to 17, \$12 @ \$20. dis 10 \$ \$torehouse (Patent), 12 to 17, \$12 @ \$20. dis 10 \$ \$torehouse (Patent), 12 to 17, \$12 @ \$20. dis 10 \$ \$torehouse (Patent), 12 to 17, \$12 @ \$20. dis 10 \$ \$torehouse (Patent), 12 to 17, \$12 @ \$ \$torehouse (
3:	Champion	Wood.   dis 25 %   Fenn's   dis 40 %   Bohren's Patent Rubber Bail.   dis 40 %   Genn's Cork Stops   dis 30 %   Star.   dis 50 %   Genn's Cork Stops   dis 30 %   Star.   dis 50 %   Genn's Cork Stops   dis 50 %   Genn's Cork Lined   dis 50 %   Genn's Genn's Best Block Tin Key   dis 50 %   Genn's
100	E. B. Ground Edge, Central Fire, 1-10's	Frary's Patent Petroleum. dis 25&10 5 West's Patent Key dis 45 5 Ancher Lock. dis 45 5 Metallic Key Lockbard Lock dis 45 5
t it	Musket Waterproof, 1-10's   Scot   ₹ G. D. & S. B.   330, dis 10 & Eley's E. B.   Soc net Eley's D. Waterproof, Central Fire   \$1.50 U. M. C., F. C. trimmed   700 U. M. C., F. L. ground   700 U. M. C., Cen. fire ground   700 U. M. C., Double W. Proof   \$1.40 dis 10&5 5 Double Waterproof, in 1 10's   \$1.40 dis 10	Metaliic Key, Leather Lined   dis 60 %   Cork Lined   dis 70 % J. Sommer's Best Block Tin Key   dis 70 % J. Sommer's Cork Lined, 1st quality   dis 90 % Self-Measuring, Enterprise   % dos 830.00, dis 20210 % Self-Measuring, Lane s   % dos 830.00, dis 20210 % Self-Measuring, Victor   % dos 830.00, dis 20210 % Felice Plates   % Botton City Self-Measuring Corp.   % dos 830.00, dis 20210 % Felice Plates   % Botton City Self-Measuring Corp.   % dos 830.00, dis 20210 % Self-Meas
XXXX	U. M. C., F. L. ground	Self-Measuring, Lane s \$\psi\$ dos. 30.00, dis 202:0 \$ Self-Measuring, Victor \$\pi\$ dos. \$30.00, dis 202:0 \$ Felice Plates \$\pi_a \pi_b\$, roc, dis 30 \$ Files.
XXXX	Colt's Pistol, in 1-10's	J & Riley Carr Horse Rasps. dis 10%
***	Central Fire.	H. Disston & Sons.   dis 10&10 \$\frac{1}{2}\$ Nicholson   dis 40&10 \$\frac{1}{2}\$ New American   dis 40&10 \$\frac{1}{2}\$ Union File Co.   dis 40&10 \$\frac{1}{2}\$
发发 化五	Cast Steel, Polished. # dos \$2.00. dis 30 \$ Cast Iron, Steel Points. # dos \$2.00. dis 50% \$ Socket. # dos \$2.00. dis 50% \$	Heller Bros.' Files. dis 40&10 \$ Western. dis 40&10 \$ Subs. new list, dis 25@30 \$ Finting Machines.
<b>海蜀属</b>	Bullard's	Knox, 496-inch Rolls.   \$3.50 each   dia 35 %   Eagle 356-inch Rolls   \$4.00 each   \$1.50 dia 35 %   Eagle 556-inch Roll   \$3.15, dia 35 %   Eagle, 556-inch Roll   2.85, dia 35 %   Crown 146-in \$2.50 dia 35 %
***	Musket, in 1-10's.	H. Diaston & Sons   New Hat, Gits 1, 5     H. Diaston & Sons   Gits 100     Nicholson   Gits 100     Nicholson   Gits 100     Nicholson   Gits 100     Old   Gits 1
×	Sargent'sdis 70&10 \$	Shepard Hand Pluter No. 8-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1
× × ×	Rotenkiss	Shepard Hand Fluter. No. 95 per doz \$6.50, dis 20 \$   Clark's Hand Fluter
AM WY	German Hatter Chain, list of Dec. 31, 1881. dis 55 8 German Coll, list of Dec. 31, 1881. dis 55 8 English Coll. 3-16 14 5-16 34 7-16 14 American Coll 60.10 .0016 .0714 .0616 .06 .0516	Fly Traps.—Paragon
* *	Covert Halter. Hitching and Breast	Fruit and Jelly Presses.  Enseprise Mig. Co
* * * *	Galvanized Pump Chain. # b 7/26 net Jack Chain, Iron	No
-	Red. P gross 8cc net Slue. P gross 8.cc net White Crayons. P gross 1.cc net Chalk Lines.—See Lines.	Marking Chapin's dis 55&10 \$ Wire Disetor's dis 10&10 \$
2 2 2	Chisels.  Socket Framing. Crossman	Wire Wheeler, Madden & Co
	Socket Frimers, Artificial Edge 1001 Co	Double Cut, Shepardson's   dis 40&10 \$   Double Cut, Hartwell's   dis 40&10 \$   Double Cut, Ives'   dis 40
4444	Socket Firmers, Witherby Tool Co	"Bee "
	Tanged Firmers ,Buck Bros (8hank)	Family, L. F. & C. 's " Handy " dis 40 %   Grindstone Fixtures.   Sargents Patent dis 70&10 %   Reading Hardware Co dis 30&10 %
	Iron, Adjustable, Lambert's   dis 20 %	U. M. C. B. E., 11 up
	Ciamps.  Iron, Providence Tool Co.'s Wrt. Iron. dis 25 a Iron, Adjustable, Gray's. dis 20 s Iron, Adjustable, Lambert's. dis 20 s Iron, Adjustable, Enambert's. dis 20 s Iron, Adjustable, Brammer's. dis 20 s Iron, Adjustable, Hammer's. dis 20 s Iron, Adjustable, Stearns'. dis 20 s Iron, Capring Co. dis 20 s Iron, Capring Co. dis 20 s Iron, Capring Co. dis 20 s Iron. Eabrard Mig. Co. dis 20 s Saw Clambs. See Vises Cilipa, Axie. See Vises	U. M. C. P. E., 9&10
1	See Vises   See Vises	Sargente Fatens   dis 70&10 5
	Racking   Globe.	Covert's Horse and Cattle Ties
	Wilson's	Hartford Hammer Co. b Nail Hammers. dis 25 Hartford Machinist, Riveting and Farrier. dis 25 Kip's. dis 30 S
	The "Swift" (Lane Bros.)	Humason & Beckley. dis 15 % Verree. dis 5 % Magnetic Tack, Nos. 1, 2, 3, \$1.25, 1.50 and 1.75, dis 25&10 % Nelson Tool Works. dis 262 to 5
	Calipers. dia 6 g Dividers. dia 6 g Dividers. dia 6 d Berris & Cali Co.'s Dividers. dia 6 d Berris & Cali Co.'s Compasses and Calipers. dis 6 d Berris & Cali Co.'s Wing & Inside or outside. dis 6 d Berris & Cali Co.'s Ouble. dia 6 d Berris & Cali Co.'s Cali Co.'s Calipers. d Berris & Cali Co.'s Calipers. d Berris & Caliper	Warner & Noble's
	Bemis & Call Co.'s Double	Providence Tool Co., Hand Cuffs, \$16.50 \$\( \) dos. dis 10 \$\( \) Providence Tool Co., Leg Irons, \$25.00 \$\( \) dos dis 10 \$\( \) Tower's
	Demis a San Carl 8 rates inside   dis 50   Sex   Sex   dis 50   dis	Nos 0 1 2 3 4 Per doz 80.50 1.00 1.18 1.35 1.50 dls coêto 5 Rosgin's Latches # doz 35c 6 40c. net Bronze Iron Drop Latches # doz 36c 60 60 0.00 net
	Corksorrews.  Rumason & Beckly Mfg Co	Providence Tool Co., Leg Irona, \$2,00 \( \text{dos} \) dos
1	Wadaworths. dis 25 % Crew Bars. Cast Steel # D 6c Iron, Bteel Points. # D 456c Carry Cambs.	Flush Chest
-	tron, Beel Foints. \$\psi \phi_6 \phi_6\$ Curry Combs. \$\phi_6 \phi_6\$ Cit of Hotchkias, Novelty, new list, July 1880. dis 24 \$\phi_6\$ Hotchkias, Novelty, new list, July 1880. dis 25 \$\phi_6\$ Hotchkias, Excir, Supr. Champion . dis 25 \$\phi_6\$ Hotchkias, Excir, Supr. Champion . dis 25 \$\phi_6\$ turtain Pins. \$\phi_6\$ dos \$\phi_6\$ co. dis 24 \$\phi_6\$ ilvered Glass. net \$\phi_6\$ turtery.	boynton's Centenniai Saw Handles soc. die 25 S Hammer and Hatches die 25 S Brad Awl Proces. 82 5 die 10 S Hiegory Firmer Chisel, assorted, Furcas. 82 5 die 10 S
1	turtain Pine.  ilvered Glass	Hickory Firmer Chisel, large, # gross 5.00 Apple Firmer Chisel, assorted, # gross 5.00 Apple Firmer Chisel, large, # gross 5.00 Socket Firmer Chisel, assorted, # gross 5.00 dia
	mernen Uusiery Co. (Table). net Am. Milier Bro.'s Cutlery Co. dia 25 % Humason & Beckley, Pocket. dia 33 % Vangatuck Cutlery Co. dia 33 % Vangatuck Cutlery Co. dia 11 die 12 de 12	BOCKET Framing Chisel, assorted, # gross 5,00 25&10 File assorted, # gross 2.75 Auger, assorted, # gross 5,00 Auger, large, # gross 7,00 Patent Auger (see 1998)
1	white Ename! net Cutlery Co. (Table).   Meriden Cutlery Co. (Table).   Meriden Cutlery Co.    Meriden Cutler Co.    Meri	wrought Chest
	¥ 8	A Comment of the Comm

	ai	U		110	JU	0,		U
	(For	Who	olesale	Meta	1 P	rices,	See 1	Pag
-	Door	Sprin	iga.					10
	Gray's Bee Ro	Rod	, regular	size, % d	oz., \$3 per gro	88, \$20.0	dis 50 9 00, dis 15 9 00, dis 15 9	2
	Warne	r's oil):	Janana	od 3	dor 0		dls 30 9	8
	No. 3.	Medit	ım, Japa , Japann	nned?	dos	2.75 die	50 dt 10 %	E
	No.4( No. 5,	"Shoo	Fly") Ser n Door si	een door	size,	doz \$1.9	0 449 60 9	T
	No. 6, No. 7, Sabin's	Large Lever	am	\$1 : 2. \$1.	 () () 3. 8:	doz 4.0	e list.  dis 60 %  e list.  dis 60 %  dis 60 %  dis 60 %  dis 33 %  dis 30 %  dis 30 %  dis 30 %	F
	Sabin's Sabin's	Boss.	No. 1, W	doz. \$4.00	; 2 \$2. ₽ d	75; 3, 8 OZ \$1.50	2.dls 3313 9	E A
	Cowell	s	No. 1, 1 plete	doz. \$18	oo; No	2, \$15. . \$2.25, (	00, dis 50 9	F
	Dra	es wing top Ed	Knive	B. Do			dis 33-5 (7), dis 36-5 (2), di	S S
į	Merrill Nobles	Meg C	0. 1	*********			dis 65&5 9	G C
1	Bradle	y's able H	andle	******	******** *******		dis 35 9	E IN
	Dougla	ls an	d Drill	Stocks	*******	*******	dis 70 9	i I
	Blacks	miths'	Self-Fee	ding	ei	ach, \$2. ach, \$7.	50, dis 20 5	6 F
	Breast, Breast,	Hotel	nkiss'		*******		dis 20 5	5
	Breast Ratche	Barth	olomew rill's	S	.each	82.50, 0	00, dls 25 7 lis 25&10 9 dls2 0 9	E
	Ratche Ratche	t, Inge	tney's	*********	******		ils 20&10 9	E Y
	Ratche	t, Moo	re's Trip and Drill	le Action , Plain,	11.00	Adjusta	lis 20@25 9 ble,	
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	Morse's	Beacl Adiu	h Patent		6	ach \$8.	oo, dis 20 9	i I
	Danbu	Heat	ters.	*******	6	ach, \$8.	oo, dis 30 9	0
	Monroe	al	*********	*********		E. \$4.50	dis 50 i dis 3356 5	1
ı	Family Acme.	(T. &	8. Mfg. C	o.)	ore	988, \$18. gross,	00, dis 25 5	8
	Klev	ator	Bucket	Co.)		gross,	\$11.50, net	
	₩ 100 Will E.	\$15 00 Bucke	@ \$51.00	7. 5 to 10	in. (Du	e's Imp	roved). roved),	6 0
	*torehe	ouse (I	@ \$10,20. Duc's Pat tegular n	ent), 12 to	17, 81	2 @ \$20.	dis to	
	For En	nd F.	Faper and	Cloth s	ee San	d Paper	. W D 6160	F
	Kettles Sauce	Pans	when T	mnea v	vare.		dis 50 1	
	Escu	Sauce	Pans	Brass.		*******	dis 30 9	A
	Brass T	ock hread		Same	liscour	ats as D	oor Locks dis 55 9 dis 25 9	E E
	Fand Fer	ets.	**** *****				dis 25 9dis 40 9dis 25 9dis 3335 9 ilis 55&10 9 ilis 25&10 9dis 45 9dis 46 9dis 60 7dis 60 7dis 70 9	G
	Fenn's Star	Cork t	ent Rubi Stops	er Ball		*	dis 25 9	GG
	Frary's West's	Pater	t Petrol	eum	*******		iis 25&10 9	G
	Metalli Cork L	e Key	, Leather	Lined		*******	dis 44 9	G
	J. Som	mer's l mer's (	Best Bloc Cork Lin	ed, 1st qu	ality.	976 on 6	ils 40 to 50	BB
	Belf-Me Self-Me	asurii	ig. Lane	8 r	dos.	36.00, 6 836.00. 6	lis 20d:10 f	8
	J. & Ri	ley Car	TT	new	list A	pril 1. T	83, dia 14 9 83, dia 14 9 dia 109	E
	Butche Moss &	r's	rr Horse	Rasps	****	new H	dia ros	8
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	Union Haller	File Co Bros.	Flies	********** *********		d	at, dia 15 % at, dia 16 % at, dia 16 % at, dia 16 % at a	P Se H
l	Wester Stubs	ing M	lachine		new	list, d	is 40&10 % is 25@30 %	H
I	Knox,	inch	h Rolls			5.50 each	dia 35 %	B
l	Eagle, Crown,	ine 4%-in	h Roll h Roll , \$3.50; 6-	n., \$4.00;	8-in., 8	6.50 eac	15, dis 35 % h, dis 35 % h, dis 35 % h, dis 36 % h, dis 36 % h, dis 36 % leach, net 12, dis 25 % 3. \$10.00	BCCC
	Americ Domest	an, 5-1	n., \$3; 6-1	n., \$3.40;	6-in., 8 7-in., 8	3.50 eac 4.50 eac	h, dia 36 % h, dia 35 % each net	BB
	Geneva Crown	Hand	Fluter, Fluter,	White Me Nos. 1, 1	etal? B15; 2,	812.50;	12, dis 25 % 3. \$10.00	
l	Shepar Shepar	d Han	d Fluter, d Fluter,	No. 85 No. 110	pe	r doz 81 doz 88.	5, dia 40 %	000
	Clark's Combin	Hand ned Flu	Fluter uter and	Sad fron	per go	GOE \$15.00,	3. \$10.00dis 30 % 15. dis 40 % 15. dis 30 % 50. dis 20 % 00. dis 30 % 00. dis 30 % 00. dis 10 % 00. dis 10 % 00. dis 46 % 00. \$4, Det	HOC
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	Wire, D Wire V	disston	r. Madde	n & Co		d	dis to \$	COEP
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	"Diamo	Cut, 8	limlets . hepards	n's	*******	d	is 40&10 %	GAC
	Double Double	Cut, D	vea' ouglass'.			d	18 40&10 % 18 40&10 % dis 40 %	N
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	Sargent	a Pate	ns			- 4	is 70&10 % is 30&10 %	M
	U. M. C. U. M. C.	B. E.	11 up			. 82.00		I
	U. M. C. U. M. C.	B. E., P. E.,	74t8	*********	******	3.10	dia 5&5 %	ZZZ
	U. M. C. Eley's E	P. E.,	748		*******	4.90	1 1	Di
	Hack	rimu's	Hack Sa	ws, com	plete	di	is 40&10 %	In Io
	Haite Covert's	ers.—(	Covert's	Pat. Rope ttle Ties nd Web. attle Ties le's rch. 1883. 's Nail H iveting s	8	d1	8 20d 10 % dis 50 %	Co
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	Humaso Verree Magneti	n & Be	Nos	2, 3, 81.25,	1.50.00	d 1.25 d	. dis 15 %	Fa
	Nelson 7 Warner	& Nob	orks	2, 3, 01.25,		di	dis 10 %	Br
	Wilkins Heavy F	e Plun on's Si famme	mitha' ers and S	ledgeseg ironand Cuff	******	111%e	# B net	NE
-	Provide:	Cuff ace To	ol Co., H	and Cuff	8, \$15.0 8, \$15.0	o W dos	dis to \$	An
-	Tower's	les.	Door or	Thumb i	atches		dis 10 %	Ha
1	Per do Roggin's	E&c	0.80 1.00	1.18 I	35 I.6	sal	8 60&10 %	Ca Ba
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1	Barn Do Wrough	t Chest		*********	gos (	11.00, di	dis 70 %	Do
1	Flush Ch Lifting.	lest	**********	*** ******		di	dia 70 %	Fu Fu Pic
1	naw and Boynton boynton	's Loo 's Cen	p Saw H	andlea	lles .	di	dis so \$	Pic He Shi
1	Brad AW	Firme	r Chisel.	assorted large, w	₩ gro	88. R2 5	dia to \$	L
	dickory	Firme	Postd' a	Interes, 20	STORE	60	0	Me

	Climax (Anti-Friction dis ss \$	I
1	Climax (Anti-Friction	I
6	Challengedis 50 % "Champion" Medina Mfg. Co\$15; dis 50&10 % Sterling Improved (Anti Friction)dis 65&10 %	F
	VICTOF GIS 2500 5 %	E
	Cheritree dis so's Kidder's 4 in., \$12 ; 5 in., \$13 ; 6 is 5 o's t's U. S 4 in., \$12 ; 5 in., \$13 ; 6 is 5 o's The "Boss" 5 in., \$12 ; 3 js in., \$10 ; 6 is 40 °S Cronk No. 4, \$12 ; No. 5, \$14.40 No. 6 st's dis 20 °S Architect, \$\tilde{\text{W}}\$ set \$6 c. g dis 20 °S Felix, \$\tilde{\text{W}}\$ set 4, \$\tilde{\text{v}}\$ of dis 20 °S Felix.	927
	Terry's Patent in., \$12; 316 in., \$10; dis 40 %	i i
6	Architect, % set	Î
400	Architect, # set	CS
2 22 2	Henshaw's, list of 11/6 changed to \$14.00,	N
2 43 5	Fitch's (Bristol), list of 136 change to \$14.00dis 65 %	1
810	ZERGEDWS CONTRACTOR CO	V
	Sargent's   dis 70% to 5	0
	Coverts, Sargent's new list	C
4010	Meneely's Pat. Safety (Old German list)dis 50 %	000
5	tiatchets. Isalab Blood	E
	Shingling, Nos. 1 2 3	Y
200	Hunt's	88
5	Shingling, Nos. 1 2 3 W doe \$7.25 \$8.00 \$8.75	BNN
2 62 6	Lathing, Nos. 1 2 3 2 doz 7.74 8.40 9.24	NP
92.0	Shingling Was see Widos 60 - 60 - 6	B
0000	Lathing. Nos. 1 2 3	N
8	Yerkes & Plumb	1
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91.9	Underhill Edge Tool Co dis 30@35 % Shingling, Nos. 1 2 3 doz \$7.25 \$8.00 \$8.75	B
	Latting, Nos. 12 3 # doz 7.76 8.40 9.25 Latting, Solid Steel	1
į.	Claw, Nos. 12 3. \$\psi \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	B
5	C. Hammond & Son	M
2	Lathing. Nos. 12 3	N
i	Claw, Nos. o i 2 3. 9 doz 8.50 0.00 9.50 Lathing, Nos. o i 2 3. 9 doz 8.00 8.50 0.00	
6	Broad. Nos. 1 2 3 4. W doz 0.00 10.00 12.00 14.00 Broad. Nos. 5 6 7 8. W doz 16.00 18.00 20.00 22.00	
-	Claw, Nos. 1 2 3 doz 5.50 86.50 86.50 Claw, Nos. 1 2 3 doz 6.00 6.50 7.00 Lathing, Nos. 1 2 3 doz 6.50 6.50 6.50	
	Peck's Champion Blade	1
	Lath, Nos. 1 2 3	P
	Shingling, Nos. 12 3 \$\footnote{0}\$ dos \$\frac{8}{5}\$ s.c. \$\frac{8}{6}\$ cos \$\frac{6}{5}\$ s.c. \$\frac{1}{6}\$ cos \$\frac{1}{5}\$ cos \$\frac{1}{5}\$ dos \$\frac{1}{5}\$ cos \$\frac{1}{5}\$ so \$\frac{1}{5}\$ cos \$\frac{1}{5}\$ so \$\frac{1}{5}\$ so \$\frac{1}{5}\$ so \$\frac{1}{5}\$ cos \$\frac{1}{5}\$ so \$\frac{1}{5}\$ so \$\frac{1}{5}\$ cos \$\frac{1}{5}\$ so \$\frac{1}{5}\$ cos \$\frac{1}{5}\$ so \$\frac{1}{5}\$ cos \$\frac{1}{5	D
	Lightning" # dos #20.00 dis to \$	M
	Wadsworth'sdis 35 @ 35&5 & Heath Patent	P
,	Hinges. Gate, Western. P dos 84.90 dis 55 %	A
	Gate, N. E	H
2	Gate. N. Y. State	D
-	Gate, Automatic	A
-	Gate, Seymour'sdis 45&10 % Gate, Shepard'sNos. 1, 2, 3, 10, 20 & 25 dis 50% to %	E
	Hinges   Gate, Western   Fdos \$4.00 dis 55 8 Gate, N. E. Reversible   Fdos \$7.70, dis 55 Gate, N. E. Reversible   Fdos \$7.70, dis 55 Gate, N. E. Reversible   Fdos \$7.50 dis 55 Gate, N. T. State   Fdos \$6.00 fd Gate, Clark's Nos. 12 \$1.00 dis 60.210 fd Gate, Automatic   Fdos \$12.50, dis 55 Gate, Automatic   Fdos \$12.50, dis 55 Gate, Common Sense   Fdos \$41.50, dis 55 Gate, Common Sense   Fdos \$40.50 fd Gate, Shepard's   G	1
5	Plate Hinges   8, 10 & 12 in. \$5.55 W 100 D	K
	Plate Hinges   8, 10 dt 12 in., \$5.55 \( \) 100 \( \) (dis 50 \( \) 10 \( \) ("Providence" \( \) 0 ver 12 in., \$4.50 \( \) 100 \( \) ("dis 10 \( \) 8 crew Hook and (8, 10, 12 in., \$2.00 \( \) 100 \( \) (")	K
	Strap	9
	14 in& up.\$5.50 \$100 B 1 to \$	1
	"Providence" over 12 ln., \$4.50 \( \) too \( \) 5. dis 10 \( \) 8 crew Hook and \$8.10, 12 in., \$7.00 \( \) too \( \) \$\) dis 10 \( \) 8 trap	B
	Wrought Strap and Tdis 60&10&5&2% for cash filess.—Riveted Shang	A
		L Bi
	Planters'	C
	Magic	81
	Hooks.	St
١	Bird Cage, Sargent's listdis 60&10 %	I C
	Hooks.  Bird Cage, Sargent's list.  Bird Cage, Reading dis octor.  Cotton.  # dos \$4.00, dis so \$	B
	Cotton Patented (N. Y. Mallet & Handle Wks), dis 30 \$	L
	Cotton Patented (N. Y. Mallet & Handle Wks), dis 30 \$	B
	Cotton Patented (N. Y. Mallet & Handle Wks), dis 30 \$	L
	Cotton Patented (N. Y. Mallet & Handle Wks), dis 30 \$	BLWB B
	Cotton Patented (N. Y. Mallet & Handle Wks), dis 30 \$	BLWB
	Cotton Patented (N. Y. Mallet & Handle Wks), dis 30 \$	BLWB I
	Cotton Patented (N. Y. Mallet & Handle Wks), dis 30 \$	BLWB B SHW
	Cotton Patented (N. Y. Mallet & Handle W kn), dis 50 S Cotton (Humason & Beckley Mfg. Co). dis 70 S Belt.  Belt.  Bench.—Hotchkiss* \$5,00 \$\pi\$ dos.  Weston's, No. 1, \$1,000; No. 2, \$9,00 \$\pi\$ dos, dis 12 & 10 S Weston's, No. 1, \$1,000; No. 2, \$9,00 \$\pi\$ dos, dis 12 & 10 S Worfill's, \$2,00 \$\pi\$ dos.  Morrill's, \$2,00 \$\pi\$ dos.  Clothes Line, Sargent's list. dis 50 & 10 S Clothes line, Reading list. dis 50 & 10 S Clothes line, Reading list. dis 60 & 10 S Clothes line, Reading list. dis 60 & 10 S Clothes line, Reading list. dis 50 & 10 S Clothes line, Reading list. dis 50 & 10 S Cost and Hat, Reading.  Wire Cost and Hat, Sargent's list. dis 50 & 10 S Wire Cost and Hat, Miles*	B L W B B H W THE B T
	Cotton Patented (N. Y. Mallet & Handle W kn), dis 50 S Cotton (Humason & Beckley Mfg. Co). dis 70 S Belt.  Belt.  Bench.—Hotchkiss* \$5,00 \$\pi\$ dos.  Weston's, No. 1, \$1,000; No. 2, \$9,00 \$\pi\$ dos, dis 12 & 10 S Weston's, No. 1, \$1,000; No. 2, \$9,00 \$\pi\$ dos, dis 12 & 10 S Worfill's, \$2,00 \$\pi\$ dos.  Morrill's, \$2,00 \$\pi\$ dos.  Clothes Line, Sargent's list. dis 50 & 10 S Clothes line, Reading list. dis 50 & 10 S Clothes line, Reading list. dis 60 & 10 S Clothes line, Reading list. dis 60 & 10 S Clothes line, Reading list. dis 50 & 10 S Clothes line, Reading list. dis 50 & 10 S Cost and Hat, Reading.  Wire Cost and Hat, Sargent's list. dis 50 & 10 S Wire Cost and Hat, Miles*	B L W B B H W Tri B T U
	Cotton Patented (N. Y. Mallet & Handle W kn), dis 30 % Cotton (Humason & Beckley Mfg. Co)	BLW B
	Cotton Patented (N. Y. Mallet & Handle W kn), dis 30 % Cotton (Humason & Beckley Mfg. Co)	BLWB R
	Cotton Patented (N. Y. Mallet & Handle W'ks), dis 50° Cotton (Humason & Beckley Mfg. Co).  Belt.	BLWB TBT UN BMPPO
	Cotton Patented (N. Y. Mallet & Handle Wks), dis 50 cotton (Humason & Beckley Mig. Co).  Belts. dis 70 dis 10 sent.  Bench—Hotenkiss' \$4.00 \$\forall dos . dis 10 d	SHW TEST UN BURPPOODS
	Cotton Patented (N. Y. Mallet & Handle Wiks), dis 50 cotton (Humason & Beckley Mig. Co).  Belts. dis 70 dis 10 dis	SAHW TEBT UN BIMPPOODE
	Cotton Patented (N. Y. Mallet & Handle Wiks), dis 50 cotton (Humason & Beckley Mig. Co).  Belts. dis 70 dis 10 dis	SHW TEST UN BURPPOODS
	Cotton Patented (N. Y. Mallet & Handle Wiks), dis 50 cotton (Humason & Beckley Mig. Co).  Belts. dis 70 dis 10 dis	SAHW TEBT UN BIMPPOODE
	Cotton Patented (N. Y. Mallet & Handle Wks), dis 50 cotton (Humason & Beckley Mig. Co).  Belts. dis 70 dis 60 dis	SAHW TABTY UN BURPPOOL BBB
	Cotton Patented (N. Y. Mallet & Handle Wks), dis 50 cotton (Humason & Beckley Mig. Co).  Belts. dis 70 dis 60 dis	BUW B
	Cotton Patented (N. Y. Mallet & Handle Wks), dis 50 cotton (Humason & Beckley Mig. Co).  Belts. dis 70 dis 60 dis	BLWB TBT UN BENTOOD BBB I
	Cotton Patented (N. Y. Mallet & Handle Wks), dis 50 cotton (Humason & Beckley Mig. Co).  Belts. dis 70 dis 60 dis	SHW THET UN BUREPOODER FOR SHE
	Cotton Patented (N. Y. Mallet & Handle Wks), dis 50 cotton (Humason & Beckley Mig. Co).  Belts. dis 70 dis 60 dis	BLIVE TEST OUN BEST FOODBE
	Cotton Patented (N. Y. Mallet & Handle Wks), dis 50 cotton (Humason & Beckley Mig. Co). dis 50 selts.  Bench—Hotchkiss' \$4.00 \$\frac{3}{2}\$ dos. dis 50 cotton (Humason & Beckley Mig. Co).  Bench—Hotchkiss' \$4.00 \$\frac{3}{2}\$ dos. dis 50 cottos (Linton, Fin. \$3 second of the cottos (Linton, Fin. \$4 second of the cottos (Linton) (Linton & Linton &	SHW THET UN BUREPOODER FOR SHE
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	Cotton Patented (N. Y. Mallet & Handle Wins), dis 50 cotton (Humason & Beckley Mig. Co).  Belts. dis 70 dis 10 dis	BLIVE CHARLES OF SHARE A SHARE
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	Cotton Patented (N. Y. Mallet & Handle Wins), dis 50 cotton (Humason & Beckley Mig. Co).  Belts. dis 70 dis 10 dis	BEN THE LEVEL BENEFICE OF THE
	Cotton Patented (N. Y. Mallet & Handle Wins), dis 50 cotton (Humason & Beckley Mig. Co).  Belts. dis 70 dis 10 dis	SHW THE UN BURNESS BERNESS THE
	Cotton Patented (N. Y. Mallet & Handle Wins), dis 50 cotton (Humason & Beckley Mig. Co).  Belts. dis 70 dis 10 dis	SHW THE UN BENEFICION BERNEFER
	Cotton Patented (N. Y. Mallet & Handle Wins), dis 50 cotton (Humason & Beckley Mig. Co).  Belts. dis 70 dis 10 dis	BEN THET TUN HE PRODUCT AND BEN ACT BERNSHELLER FREE FREE FREE FREE FREE FREE FREE
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	Cotton Patented (N. Y. Mallet & Handle Wing), dis 50 cotton (Humason & Beckley Mig. Co).  Belts. dis 70 dis 10 dis	BANG BANG BANG BANG BANG BANG BANG BANG
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	Cotton Patented (N. Y. Mallet & Handle Wing), dis 50 s Cotton Humason & Beckley Mig. Co). Belts. dis 70 dis 10 s Bench—Hotchkiss' \$,00 \$\pi\$ dos. dis 10 dis 10 s Weston's, No. 1, \$10.00; No. 2, \$0.00 \$\pi\$ dos. dis 10 s Weston's, No. 1, \$10.00; No. 2, \$0.00 \$\pi\$ dos. dis 10 s MoGill's, \$2.00 \$\pi\$ dos. dis 10 s MoGill's, \$2.00 \$\pi\$ dos. dis 10 s MoGill's, \$2.00 \$\pi\$ dos. dis 10 s Morrill's, \$2.00 \$\pi\$ dos. dis 10 s Morrill's, \$2.00 \$\pi\$ dos. dis 10 s Morrill's, \$2.00 \$\pi\$ dos. dis 10 s Clothes Line, Sargent's list. dis 60 dos 10 s College Sargent's list. dis 60 dos 10 s College Sargent's list. dis 60 dos 10 s College Sargent's list. dis 60 dos 10 s Wire Coat and Hat, Miles' Fleture Hooks, Brown's Pat. Solid Brass, \$4.00 \$\pi\$ Wire Coat and Hat, Miles' Fleture Hooks, Brown's Pat. Solid Brass, \$4.00 \$\pi\$ Wrought Staples and Hooks & Staples, dis 70 s Wrought Staples Stanley's list. dis 70 s Wrought Staples Stanley's list. dis 70 s Wrought Staples Stanley's list.  Nos. 6 7 \$ 9 10  Mumatree Fatent Hooks and Kyes. mew list dis 70 s Hooks and Kyes.—Malleable Iron. dis 50 s Hooks and Kyes.—Wille dis 70 s Hooks and Kyes.—W	BLUWB THET VIN BENEFICOUR BACK BERNEFICH FIRST BERNEFICH FIRST BENEFICE FOR BENEFICE BENEFICE BUT BENEFICE BUT BENEFICE BUT BENEFICE BUT BENEFICE BUT BENEFICE BUT
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	Cotton Patented (N. Y. Mallet & Handle Wing), dis 50 s Cotton Humason & Beckley Mig. Co). Belts. dis 70 dis 10 s Bench—Hotchkiss' \$,00 \$\pi\$ dos. dis 10 dis 10 s Weston's, No. 1, \$10.00; No. 2, \$0.00 \$\pi\$ dos. dis 10 s Weston's, No. 1, \$10.00; No. 2, \$0.00 \$\pi\$ dos. dis 10 s MoGill's, \$2.00 \$\pi\$ dos. dis 10 s MoGill's, \$2.00 \$\pi\$ dos. dis 10 s MoGill's, \$2.00 \$\pi\$ dos. dis 10 s Morrill's, \$2.00 \$\pi\$ dos. dis 10 s Morrill's, \$2.00 \$\pi\$ dos. dis 10 s Morrill's, \$2.00 \$\pi\$ dos. dis 10 s Clothes Line, Sargent's list. dis 60 dos 10 s College Sargent's list. dis 60 dos 10 s College Sargent's list. dis 60 dos 10 s College Sargent's list. dis 60 dos 10 s Wire Coat and Hat, Miles' Fleture Hooks, Brown's Pat. Solid Brass, \$4.00 \$\pi\$ Wire Coat and Hat, Miles' Fleture Hooks, Brown's Pat. Solid Brass, \$4.00 \$\pi\$ Wrought Staples and Hooks & Staples, dis 70 s Wrought Staples Stanley's list. dis 70 s Wrought Staples Stanley's list. dis 70 s Wrought Staples Stanley's list.  Nos. 6 7 \$ 9 10  Mumatree Fatent Hooks and Kyes. mew list dis 70 s Hooks and Kyes.—Malleable Iron. dis 50 s Hooks and Kyes.—Wille dis 70 s Hooks and Kyes.—W	BUWB THE TOWN REPROCESSION AND THE SECRETARY OF THE SECRE
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	Cotton Patented (N. Y. Mallet & Handle Wing, de 50 Cotton Humason & Beckley Mig. Co). Belts. dis 70 de 10 de	BLUWB THE TOUN BEFFEROUGH BEFFERO
	Cotton Patented (N. Y. Mallet & Handle Wing, de 50 Cotton Humason & Beckley Mig. Co). Belts. dis 70 de 10 de	BUWB THE TOWN REPROOF BE TO THE SECOND BY THE THE SECOND BY THE THE SECOND BY THE SECO
	Cotton Patented (N. Y. Mallet & Handle Wing, de 50 Cotton Humason & Beckley Mig. Co). Belts. dis 70 de 10 de	BUWB THE TOWN REPROOF BE TO THE SECOND BY THE THE SECOND BY THE THE SECOND BY THE SECO
	Cotton Fatented (N. Y. Mallet & Handle Was, dis 20 Selts.  Cotton (Humason & Beckley Mig. Co.) dis 70 Selts.  Bench-Hotenkiss \$1,00 \$100 dis 70 Selts.  Weston's. No. 1, \$10.00; No. 2, \$5.00 \$100 s dis 10 \$100 Mectin's. No. 1, \$10.00; No. 2, \$5.00 \$100 s dis 10 \$100 Mectin's. No. 1, \$10.00; No. 2, \$5.00 \$100 s dis 10 \$100 Mectin's. No. 1, \$10.00; No. 2, \$5.00 \$100 s dis 10 \$100 Mectin's. No. 1, \$10.00; No. 2, \$5.00 \$100 s dis 10 \$100 Mectin's. Clothes line. Reading list.  Color line. Reading list.  Celling, Sargent's list.  dis 60 \$100 \$100 Mectin's.  Coat and Hat. Reading.  Hat. Gem dis 60 \$100 Mectin's.  Vice Coat and Hat. Gem dis 60 \$100 \$10 Mectin's.  Vice Coat and Hat. Gem dis 60 \$100 \$10 Mectin's.  Vice Coat and Hat. Gem dis 10 No. 10 No. 10 Mectin's.  Vice Coat and Hat. Gem dis 10 No. 10 No. 10 Mectin's.  Vice Screw Hooks Brown's Pat. Solid Brass. \$4.00 We gross.  Tassel and Picture (T. & S. Mig. Co.) dis 10 No. 10 Mectin's Mechinisms Mechini	BLUWB THE TOUN BEFFEROUGH BEFFEROUGH BEFFFEROUGH BEFFF

18	De Bequedls 10&10 % Police Small, \$6.50; MeG., \$7.75; Large, \$10.00dl. 10% Convex Reflector \$2.7 % doz. dls 15 %
* 80.8	Convex Reflector   \$2.7 \( \) dot. dis 1 \( \) \( \) \( \) t. emon   \\$ \) \(\) \( \) \( \) \( \) \( \) \( \) \( \) \( \) \( \) \( \) \( \) \(
大大	Wood dox 3.00, dis 35 % Eureka, Tinned dox 8.00, dis 10 %
18	Bammis'No. 1, \$5 2, \$8.40; 12, \$15 \$\text{W} doz; dis 25 \$\text{CIS} 25 \$\text{W} doz; dis 25 \$\text{CIS}\$
万元	Jennings "Star"
RARA	Dean's Nos. 1. * doz. \$15.00' 2, \$0.00 3, \$4.50 dis 10210 \$  Lines.—Linen Fish
1%	Cotton Chalk
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Z, \$7,00; No. 3, \$7.50 & gross
お 男 男	Masons' Colored Cotton
7. 7.	Locks and Latches. Cabinet Fools ) Changes made in list price of
8	Cabinet, Gaylord some numbers Jan. 1, 1881, dis 50%2 % cash.
83839	Cabinet, A. E. Deitz
5	Eagle Trunk, new list, Jan. 1, 1881
	Yale Lock Co., Flat Key
3	Cabinet, P. & F. Corbin.  Cabinet, P. & F. Corbin.  Cabinet, A. E. Deltz.  Cabinet Stoddard Lock Ce.
	Norwich.
8	P. & F. Corbin Dis 65 & 2 %, ccsh, from Russell & Erwin Revised List of December Mallory, Wheeler & Co., 10, 1885.
8	Russell & Erwin
	Whipple Mfg. Co
%	Whippe Mig Hardware Co. (low list). dis 45% Reading Hardware Co. (low list). dis 45% \$1 \frac{1}{2} \text{ Stc. 50 } \text{ doz net Barnes Mfg. Co. dis 40 \$\text{ dis 40} \text{ mis 40} \text{ mis 40} \text{ fill stc. 50 } \text{ dis 40} \text{ dis 40} \text{ fill stc. 50 } \text{ dis 40}  fill stc.
	Langstroth & Crane's : Round Key Latchesdis 40&10 %
%	Barnes Mfg. Co. dis 40 %  Langstroth & Crane's: dis 40 %  Flat Key Latches. dis 33\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
%	Mallory, Wheeler & Co. Dis 45 & 2 % cash, from Re
	Norwich Lock Co Yale Lock Mfg. Co.'s "Standard"dis 40 %
%	Eagle
	Scandinavian (Moore Bros.)
150	Russell & E-win   FADLOCKS   Russell & E-win   Mallory   Wheeler & Co.   Dis 45 & 25 & cash, from Re Wm. Wilcox & Co.   Vised List of Dec. to 1882, Norwich Lock Co.   Vised List of Dec. to 1882, State Lock Mfg. Co.'s "Standard"   dis 40 \$ Eagle.   dis 25 \$ Romer's   dis 25 \$ Romer's   dis 50 \$ Concestoga   dis 50 \$ Concestoga
-	Fraim & Bro. List of 1883-84
	Afailets.—Hickory
	Penfield Block Co., Lignumvitæ & Hickory dis 30 %
	Ment Cutters. Dixon's(P.S.&W.)Nos. 1 2 3 4  % doz\$14.00 17.00 19.00 30.00—dis 25&5
8	Miles Challenge
et	Dixon's(P.S.&W.Nos.   2   3   4
* *	Hales'
8	Draw Cut. Nos. 5 2 6 8 10 Each. \$50.00 75.00 80.00 225.00 400.00—dis 20
**	Nos 1 2 3 4 B Each \$5.00 7.00 10.00 25.00 50.00 60.00
**	Enterprise
*	Kieser's No. 55
*	Kleser's Butcher
6	Pennsylvania
6	Each
h	Am. (2d quality), W gross, 1 blade, \$7 2 blades, \$12 3 blades, \$18
5 5 5	Smith's, \$\vec{v}\$ dos, Single, \$2.25; Double, \$3dis 33\\\ \vec{s}_2\\ \vec{v}\$ Cowles Hdw. Co
Sit	Beef Shavers (Enterprise Mfg. Co.)
8	Stebbins Tinned Ends
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* * *	87.00 8.00 0.00 10.00. V dos. dis 60&10&10 \$
HHMMAN	Nails See Trade Report Wire Nails See Trade Report Wire Nails See Trade Report Wire Nails See Trade Report S
HENENKER	Wire Nalls dis 30 %  Nuts and Washers in lots less than noch  w n add 16c to list; 1 lb. boxes, add ic to list,  154 off list  Hexagon Nuts
**********	Wire Nalls dis 30 %  Nuts and Washers in lots less than noch  w n add 16c to list; 1 lb. boxes, add ic to list,  154 off list  Hexagon Nuts
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32	
Punches.  Belt or Drive dos \$2.00: 2.25: 4.50	distro@so
Belt or Drive # dos \$2.00; 2.25; 4.50 Bemis & Cali Co, 's Cast Steel Drive Bemis & Cali Co, 's Springeld Socket Spring # do \$7. Bemis & Cali Co, 's Spring and Check Bemis & Cali Co, 's Spring and Check Boild Tinners' # dos \$1.	dis so co, dis soc
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R. Sliding Door. Wrought Brass. # 3 sliding Door, Bronsed Wrt. Iron # footsliding Door Iron. Painted # foot	50, dis 10@ ot 120, dis 40, dis 10d
Solid Tinners'	5,60—dis
er too feet	.30~
Badger's (not Emerson)	\$2.00, dis
J. R. Torrey Rasor Co.  #Rasor Strops. Genuine Emerson. Badger's (not Emerson). Imitation Emerson. Funt's. Chapman. Baunder's. Torrey's. ####################################	dis
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Mnfs' List. February 18 1884	. dis ic i
Manila	ich P b 19
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Acme Anti-Friction).  Rope.  Mnfs' List. February 18 1884.  Maulia	# B 3C I
Belf-Heating, Tailors  Gleason's Shield and Toilet.  Mrs. Pott's Irons, Doubled Pointed	loz \$18.00 I dis 2 dis 3
Enterprise Star Irons, new list, July 20, 1 Combined Fluter and Sad Iron	882dis 3 15.00, dis 1 .8160, dis 1
Chinese Laundry (N. E. Butt Co.).  New England  Sand Paper and Emery Paper.  Bacder & Adamson's Flint, 2, 256 & 3, 500  Bacder & Adamson's Flint, 2, 256 & 3, 500  Bacder & Adamson's Flint, Assorted. 4,73  Bacder & Adamson's Star. 3,74  Bacder & Adamson's Star. 3,74  Bacder & Adamson's Star. 4,73  Bacder & Adamson's Star. 5,74  Bacder & Adamson's Star. 7,74  Bacder & Adamson's Star. 7,74  Bacder & Adamson's Star. 7,74  From Starles Best Flint, No. 356  From Bartles Best Flint, No. 356  From Madison Mills Flint, all Nos. 7,74  Bartles Best Flint, No. 356  From Madison Mills Flint, all Nos. 7,74  Bartles Fmery Paper. 7,74  From St. 50 Ga 11  Bartles Emery Cloth. 7,74  From St. 50 Ga 11  Bartles Emery Cloth. 7,74  From St. 50 Ga 12  Crocus Cloth. 7,74  From St. 50 Ga 12  From St. 50 Ga 12  From St. 50 Ga 12  From St. 50 Ga 13  From St. 50 Ga 14  From St. 50 Ga 15  From St. 50 Ga	Pream
Bacder & Adamson's Filit, 4, 256 & 3, 5,00; Bacder & Adamson's Filit, Assorted. 4,75; Bacder & Adamson's Star	ream
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New England, same list as B. & A. Funt.  Sast Cerd, — .cmmon.  Patent.  Silver Lake, Hemp.  Silver Lake, White Cotton W 5 50  Silver Lake, Drab Cotton W 5 54  Kaw Hide, W foot, ¼ in., 5c.; 5-16 in., 7c.;  Steel Kilbon.	# B 130 B
Silver Lake, White Cotton	c, dis 10&5 c, dis 10&5 dis 10&5
Steel Ribbon	dis 15
Clark's, No 1, \$10.00; No. 2, \$5.00 per gross Ferguson's	dis 3314 dis 3314 dis 50
Walker's. Hammond's Window Springs. Northup Window Springs. No. 1, \$10.00 V gr	dis 25
Common Sense," Japanned, Coppe Bronzed Fgron Common Sense," Nickel Plated. Fgron	red and 88 \$5.00 BB \$\$10 00 BB
Kempshall's Gravity Kempshall's Nodel Payson's Perfect	dis socia
Raw Hide, \$\psi\$ foot, \$\frac{1}{4}\$ in., 5c.; \$\frac{1}{4}\$ fin., 7c.;  Steel Ribbon.  Sash Lecks.  Clark's, \$0. \$\frac{1}{4}\$ io.co; \$\frac{1}{6}\$ o. \$\frac{1}{4}\$ \$\frac{1}{6}\$ o. \$\frac{1}{4}\$ io. \$\frac{1}{6}\$ o. \$\frac{1}{6}\$ io. \$\frac{1}{	anddis 3316 :
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14360 15 0 15360	Stearns   dis 30%   Spoke Trimmers   # dos \$10.00, dis 40%   Stearns   # dos \$40.00, dis 40%   Stearns   # dos \$40.00, dis 50%   Uves   No. 1, \$15.00   No. 2, \$12.00 # dos, dis 50%   Deurlass   # dos \$40.00, dis	AC 5
14 C 15 C 146C 96C	Ives'No. 1, \$15.00; No. 2, \$12.00 @ dox, dis 55& Douglass'	15
9160 9160	Species   Sasting   Sast	10
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dia 35 %	## ## ## ## ## ## ## ## ## ## ## ## ##	10
30 %	Turkey Oil Stone (Chase)4 to 8 in., # B, toc, dis n Turkey Slips (Chase)	05
20.00	The second of an Alax	- 4
5%	Gold Medal. # gross \$6.00, dis 26 "Mirror". # gross \$6.00, dis 26 Lustro. # gross \$4.75, n Ruby # gross \$4.75, n	et
5%	Joseph Dixon's	et et
iet 1	small, \$1, No. 2, meditum, \$4.  Tuckus, Frade, &cc.  New List, Sept. 1, 1882.  Finned Swedes Tacks. dis 30 \$ Finned American Cut Tacks. dis 30 \$ Finned Am	
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Ga Ga	reaps.  me. Newhouse dis 45 gme. Oncide Pattern dis 50 gme. Oncide Pattern dis 50 gme. Oncide Pattern dis 40 dro 60 gme. Blake's Patent dis 40 dro 7 gme. Blake's Patent dis 40 dro 8 gme. Wood, Choker Woos 8 gme. Good, Good 60 gme.	
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Spoke Trimmers	5%
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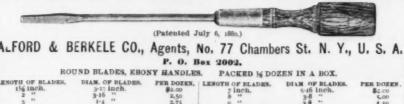


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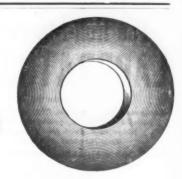
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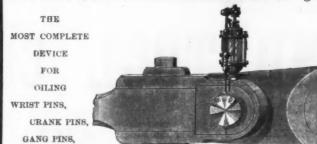
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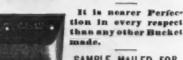


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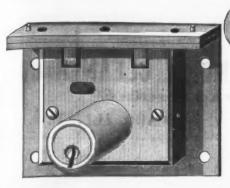
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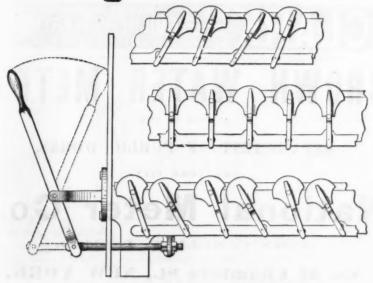


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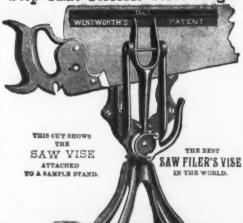
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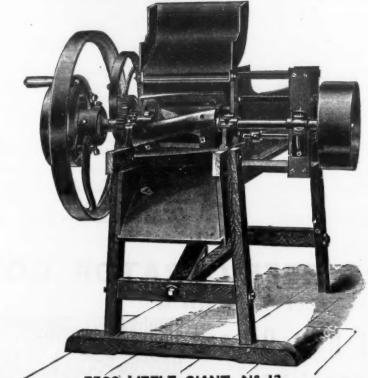
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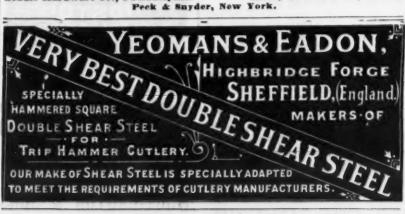
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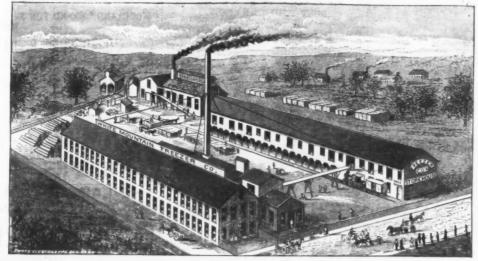
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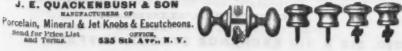
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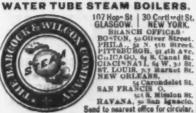
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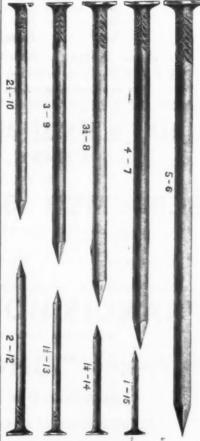
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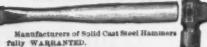
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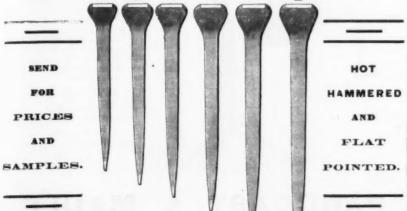
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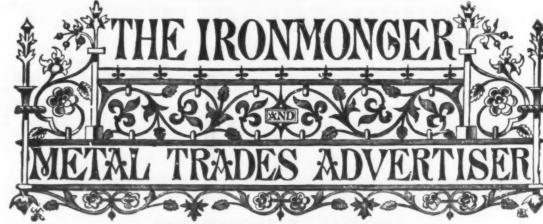
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FITTED UP COMPLETE WITH USEFUL TOOLS.

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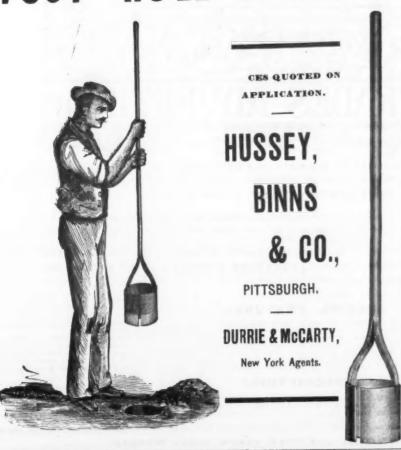
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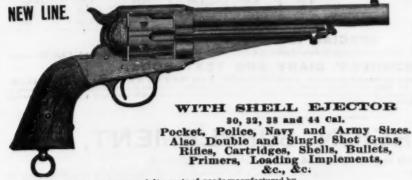
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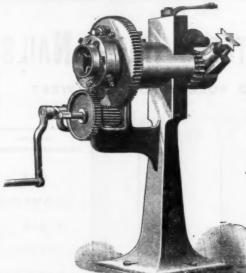
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Trenton Eagle Anvils, American, 100	No. 2 medium Jap'd Coil No. 'o. per gross ne Other Standard Springs Warner Door Springs, pe
Apple Parers. \$5.40 ne diobe Apple Parers. \$5.40 ne Penn Apple Parers \$4.50 ne Lots of 10 to 25 dozen special prices	Standard Spring Hinges Single No. o, per doz. net No. 1.
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Light and Commondis 40 9	
Bells Boos Mfg. Co. Light Hand Bells dis 70210 9 Swiss Pattern Hand Bells 05 9 Conneil's Door Bells dis 1x210 Gt. Western & Kentucky Cow new liss dis 60	Bright or Ann'd, No. o  No. 19  No. 29  No. 27  Coppered, c to 18.  Tinned Broom Wire Galvanised Barb Wire. Galvanised Barb Wire. Galvanised No. 7 to 18.  Wringers.
- A DE CALLES	Galvanized Barb Wire Painted Barb Wire Galvanized No. 7 to 18
Bertus Machines Augers List : 50 dis 45% 50 angular, without Augers	Peeriess No.214
Braces, Fought Shitter   Gis cox   0	Gaivanised No. 7 to 18.  Wringers, Peerless No. 256.  "No. 2 Universal No. 256.  Novelty No. 2, for comme No. 3 Excelsior E, for stations
American Ball	In lots of 1 doz. \$6.00 doz. d
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Mayer's Loose Joint	TERMS.—Note or acceptar rate of exchange on New cent. for oash, if remitted invoice.
Oliver   Description   Oliver   Olive	burgh Trade Re
Chains.—German Halter and Coll. list December 31	13/ to 6 by 3/ to 1 inch 13/ to 6 by 13/ to 13/ " 13/ to 6 by 13/ to 13/ "
Best Proof Coli Chain—English.   B 7/4c net	1 and 1% by % to % " 16. M and 16 by % to % incl Rounds an
(hisels.—Socket Framingdis 70&10 \$ 80cket Firmer	2 to 2%
Casters, -Bed (new list July 1, 1880,)dis 45/950 %	% to %
Enterprise dis 20 dis 2	14 to 114
Landers, Frary & Clark, J. Russell & Co., Lamson & Goodnow Mfg. Co. and Meriden Cutiery Co., Manu- facturers' prices net.	% to 116 by 5-16 to 34 Inch Wagon 1
Plate dis 4 % % % % % % % % % % % % % % % % % %	Wagon Li and Li  15
Tinned	Heavy
₩ dos.#3.00 3.75 4.24 4.75 5.25 6.00 7.00 8.00 0.00 F0 0 1 2 3 4 5 6 7 8 Files.	11/2 to 3/4 by 3/2 and 5-18 " 1 to 13/4 by 3/2 and 5-18 " 14 to 3/4 by 3/2 and 5-18 " 14 and 3/4 by 3/2 and 5-16 "
	134 to 6 by 34 to 3-16
-5\\$\tag{\text{dis 35 \frac{4}{35 \text{dis 35 \frac{4}{35 dis 35 \text{dis 35 \text{d	1 10 1% by Nos. 11 and 12. 34 and 13-16 by 16 to 3-16 34 and 13-16 by Nos. 11 and
Geneva Fluter & Sad Iron dis 25 % Pavorite com. Fluter & Sad Iron dos \$10.50 net Hammers dis 30 % Yerkes & Plumb's. new list dis 30 %	4 to 75 by 4 and 5-16 4 and 5-by 4 and 5-16 15-6 to 6 by 16 to 3-16 15-6 to 6 by 16 to 3-16 15-6 to 6 by 16 to 3-16 15-6 to 15-6 by 16 to 3-16 15-6 to 15-6 by 16 to 3-16 16-6 and 13-16 by 16 to 3-16 16-6 and 15-16 by 16 to 3-16 16-6 and 15-16 by 16 to 3-16 16-6 and 15-16 by 16 and 15-16 16-6 and 15-16 by 16 and 16-16 16-6 and 16-16 by 16 and 16-16 16-6
Maydole Hammersdis 15 % Howell A. E. Naii Hammers,per dos. net \$3.75	inch by Nos vi and 12  Hoop  134 to 4, Nos. 13, 14 and 15
Disston Loop Handles Crosscut	124 to 4, Nos. 13, 14 and 14. 124 to 3, Nos. 13, 14 and 15. 124 to 3, Nos. 15, 17 and 18. 124 to 3, No. 19. 124 to 2, No. 20. 124 to 2, No. 20. 124 to 2, No. 22. 125 to 1, and 146, Nos. 13, 14 and 15, 15, 16, 17 and 18, Nos. 19, 14 and 15, Nos. 19, 17 and 18, Nos. 19, 18, Nos. 19, 18, Nos. 19, 18, Nos. 19, 19, 19, Nos. 19, 19, 19, 19, 19, 19, 19, 19, 19, 19,
Huntdis 25 %	1% to 2, No. 23
Strap and T	15-15. 1, and 156. No. 22
** Pol'ed and P''(d. 31 28 25 24 23 dis 30&105 Clinton 23 21 20 19 18 dis 30&105 Clinton 23 21 20 19 18 dis 30&105 Saranao 24 20 20 20 20 20 20 20 20 20 20 20 20 20	16, Nos. 19 and 20.
Hay and Straw Knives. Lightningper doz, net \$18.00 Electric	13-16, Nos. 16, 17 and 18
Walton Straw Knives 17.00 Locks and H nobs. Branfordnew list dis 60&2 \$ cash	94. Nos. 13, 14 and 15 4. Nos. 16, 17 and 18 54. Nos. 19 and 20
Gaviori Cabinet	1. No. 22 11-16, Nos. 13, 14 and 15 11-16, Nos. 16, 17 and 18
Nation state	11-16, Nos. 19 and 20 11-16, No. 21
suckeyeLarge list net ; small list net	Nos. 16, 17 and 18
Tublist 97.50; No. 1, 90.00 v dos net Guards, 40cents extra. Lawn Newcrs.—Pennsylvania	9-16, Nos. 13, 14 and 15 9-16, Nos. 16, 17 and 18
Long and Short Cutter as list	9-16, No. 21 9-16, No. 23 9-10, No. 23
Pennsylvania Pattern	Nos. 16, 17 and 18 Nos. 19 and 20
Stehbing Gates dis 7-error like (Second Lincoln) at Lincoln dis 7-error like (Second Landers, Frary & Clark's Petroleum dis 25km & Gran Liquor Cocks, new list Jan. 1 1884. dis 15 k Cork Lined dis 20 k	The prices under moop in
Core Labor   Clas 70 k	1-loc per lb. extra will be lighter than the lightest ind 1-loc per lb. extra will be o to specified lengths. Harrel
Hale's	ato 11 lbs, per set of 6 hoops lbs, and less than 9 lbs, pe
Planes.—Sandusky Tool Co	oto 11 lbs, per set of 6 hoops 8 lbs, and less than 9 lbs. per set of 6 hoops 8 lbs. for Cutting to Len All Iron, including Tire
Plane trons.—Ohio Tool Co	No. 9 and heavier Plow Slabe
Fumbs and Levels.  Stanley's Adjutable dis 55kto \$  Stanley's Adjutable dis 55kto \$  Non-Adjustable dis 56kto \$  Picks No.  Easer Stress Lamont Combination per jos. \$4.00	No. 10 to 14
FORM IOUS \$42.00	No. 25 & 26
Initiation Emerson	No. 27. 478 No. 28. 516 All shee.s No. 18 and light not less than 2.10c extra. 1st quality (A). 1-054c   Galvanised C. H. B.—(Char. Nos. 14 to 20. 120 Nos. 21 to 24. 130 Nos. 25 And 26. 140 50 @ 5254 \$ discount. Copal Scree
P dos \$6.00 10.25 13.75 14.60 16.75 19.50 Lbs	ist quality (A)
Try Squares, Stanley	Nos. 25 and 26
eythes.—Golden Clipper, Damascus Hlade, Boxed and Sharpened	154 by 54 by 6-18
Sharpened	134 by 1 in.m, for Plow Hand
Disston's Circular. dis 40 £ 2 buston's Circular. dis 40 £ 2 buston's Circular. dis 40 £ 40 £ 40 £ 40 £ 40 £ 40 £ 40 £ 40	8 lbs. to the yard2.90   2
Lightning Buck Saws, cross bardis. to \$	in i
Bowland	214 and 3 by 16 " 12 214 by 5 10 " 8 li Flat Rails.—Punched 114 to 2 by 14 to 16 inch
Washita Extra	114 by % and 7-16 inch 114 by %, 7-16 and 14 inch
# Bilps. * 590 # 139 net Hindostan Oil Stone No. 1 * 8 80 / Ave Stone. 8 80 / Billis * 700 ** ** ** ** ** ** ** ** ** ** ** ** *	Norway Guard Iron, 32x4x46 and 34x Drag Part
Hindostan Oil Stone No. 1	Dropper Bars Oylinder and Landside Iron. Flow Beam Iron.

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000	Gem No. 3 small Jap'd     \$2.00       " No. 2 medium Jap'd     2.75       Coll No. "a, per gross net     \$6.00	% X
et et	Warner Door Springs per dos. net	5
00	No. 1. Other Standard Spring Hinges dis 2:3:10 Stocks and Dies. dis 1:3:10	S S S S S S S S S S S S S S S S S S S
50 00 e\$	Steve Pelish.—Gem	% N
lo.	Hound Head Hrass. dis. 60 Round Head Lon, dis. 63 Species. dis soctroës: German Silver. dis soctroës: Britainis, Boardman's dis soctroës: Britainis, Boardman's dis soctroës: Britainis, Boardman's dis soctroës: Britainis, Boardman's dis soctroës: German Silver. dis soctroës: Tinned. Tarker's. dis soctroës: Germ No. 3 smail Jap'd. 82.00 Weller No. 3 smail Jap'd. 2.75 Good No. 0 per gross net. dis soctroës: No. 2 medium Jap'd. 2.75 Coll No. 0 per gross net. dis soctroës: Warner Door Springs, per dos. net. 1.7 Standard Spring Hinges. dis soctroës: Standard Spring Hinges. dis soctroës: Steve Pelish. German dis soctroës: Steve Pelish. German dis soctroës: Steve Pelish. German dis soctroës: Fire Fiy Scottos and Disc. Tacks. dis soctroës: Dixon. dis soctroës: Stocks and Disc.	2 1
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×	Double Pointed Tacks. dis 4084 Traps, Genuine Oneida—Newhouse. dis 35 Im. Oneida—Newhouse list. first qual. dis 50 Vises.—Solid Box. Trenton new list. dis 45 60 Wrenches.—Agricultural dis 70 Coes' Genuine. dis 50 Coes' Mechanics dis 50 Miss octock; Wire. Bright or Ann'd. Ne. o to 18 dis 50 Mis 50 Miss octock;	
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**	Wringers   Peerless   No.246   \$4.0   \$4.0   \$0.2   \$4.0   \$1.0	O F
PRAM	PITTSBURGH.	E
***	Merchant Iren. TERMS.—Note or acceptance at 60 days, with current rate of exchange on New York, or a discount of a percent, for cash, if remitted within 10 days from date of	B
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	These like that the best apply to Cotton Tiese.  1-toc per lb. extra will be charged for each gauge lighter than the lightest indicated.  1-toc per lb. extra will be charged for cutting floops.	1
ч	Rorrel Hoons	1 5
	a to 11 lbs, per set of 6 hoops. 3.50 8 lbs, and less than 9 lbs, per set of 6 hoops. 3.50 Less than lbs, per set of 6 hoops. 3.60 Extrus for Cutting to Length all Proceeding Iron.	Bis
	Tank Iron.	gli
	No. 9 and heavier	in
	Common.         Charcoal.         Juniata.           No. 10 to 14.         3-50         5-00         6-50           No. 15 to 21.         4-10         5-6e         7-10	A
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	All shee-s No. 18 and lighter, over 30 inohes wide, not less than 2.10c extra.  Wood's Futent Flowished Sheet.  ### Bond	Sa
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1	154 by \$6 by \$18	
	by 1 in.1h, for Plow Handles	on
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1	Splice Joints for 12, 16 and 20-lb. Rail, 400 each: 18 and 20 lb. Itali. 50. each: 40 lb., 600 each. 14 by % and % Spikes for 20 and 28-lb. Rail	du
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H	Drag Bars 3-00 Dropper Bars 3-80 Dyinder and Landside Iron 3-80 Dropper Bars 3-80	

1	THE IRON AGI	2
W. W	Naile.	T
W W	Best Quality Refined Cast Steel. Square, Flat, Octagon and Round. % to sinches, inclusive.	
MMMM	Relie.   R	
* *	5-32 inch. 2-360 % inch. 25-60 Oil Well Steel Forzings. 250 Machinery Steel.	
MEN N	Ordinary Sizes % to 2 inch Crucible. Open Hearth	
**	M and 314 to 6 70 5140	1
意 发	Square, Flat and Octagon, &c extra throughout the	-
%	Cut to specified lengths, 3c extra.  Rammer Cast Steel.  Crucible Cast Steel.	1
4	Sheet Steel.—Cruoible.	
· · · · · · · · · · · · · · · · · · ·	Best. 2d Qual. 3d Qual. Open Hearth, 1cc sc sc ic. extra for each additional gauge.	
- 天鬼鬼	Auger and Auger Bit	
% % c c	Pick, plain (hammered).	1
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000	Spindle, sublect to Machinery classification. Or Tran String Steel Control of the	
0	Slide Bars, plain	l
t	Boller, Fire Box and Plus Charles	
r	ately.	
	Locomotive Tank Steel. 6c Square. Round. Half Round and Flat Bastard. 8c inch and over. 8c Mill Saw. 8-inch and over. 8c	
000	Square. Round. Half Round and Flat Bastard. 8- inch and over	
0000	Thre Cast Steel. 6c  1x3:16, 3x3:16 and 3	
	1X	-
20.00	Fork and Rake, Crucible 60 Horse Bake Steel, cut to lengths, Crucible 67 Hoe. Crucible 60 Corn Stalk Cutter, bevoled 60 Beveled Hoe and Shovel Steel in Bars 60 Crucible 70w Steel in slabs 60	t
-	Sessemer and Onen Beauty	1
	Tire, 2-16 thick and above.	
	Toe Calk 300 Plow 300 Plow Axie Billets 300 Related by Selejrh Shoe 300 Cutter Shoe cut to lengths and taperon 400 Scythe Back Steel 400 Related by Selejrh Selejrh Selejrh Selejrh Selejrh Selejrh Selejrh Selejrh Selejrh	-
	Scythe Back Steel.  Grain Drill Bars. 40  Points. 40  Rolling Coulter Blanks, cut and panched	I
	Thrasher Steel	
	Terms.—Four months: a per cent. discount for cash, if remitted within so days.  Relie and Castings.	
	Rolling Coulter Blanks, cut and punched	
	Pipe Mill Cassings. Small size. 3 C Rolling Mill Cassings under to lbe 5 C Spur and Bevel Wheels, large 4	
	Pulleys up to 30 inches amail 4500 over 30 inches 500 i	
	6 to in diam. 8 to so in long. 40	
	Pipe Mill Castings   Mill Castings   Mill Castings   S   C	
	White and Red Lead. Strictly Pure White Lead in Oil. in kegs. 6c.: in 24 D Tin Palls, 14c. P D over keg price: 1216 D Tin	
	Strictiv Pure White Land in Oil, in kegs, 6c.: In 25 B Tin Palls, 16c. F B over keg price: 12% B Tin Palls, 16c. F B over keg price: 12% B Tin Palls, 16c. F B over keg price: 12% C B over keg price: 12% C B over keg price: 12% C B over White Lead in Barrels. 6c. 12% C B over White Lead in Barrels. 6c. 12% C B over White Lead in Barrels. 6c. Freights equalized with all points where White Lead is made.	1
	Litharge (Potter's Lead)  Freights equalised with all points where White Lead is made.  Terms: Note at sixty days, or if paid within to days.	CA -
-	Terms: Note at sixty days, or if paid within it days from date of invoice a discount of 2% per cent, will be allowed, but not otherwise.  Window Glass.	7
1	Discount, to % on Single Strength, to % on Double.	

	Single Stren	igth.			
United	Bines.	AA.	A	B.	C.
39	5 x # to 10 x 15	88.7¢	\$8.00 8.50	\$7.50 8.00	87.00 7.3
45	18 X 24 EO 20 X 28	10.75	9.75	8.75	7.7
54	15 X 34 to 24 X 30	12.25	10.75	9.00	***
90	26 X 28 to 24 X 36	13.00	11.50	9-75	***
6	26 X 36 to 26 X 44	14.50	13.24	10.75	500
8.4	16 x 46 to 30 x 50	15.00	14.00	11.24	
000	30 X 52 to 30 X 54	0.000	2255		555
0.4	36 X 56 to 34 X 56 34 X 58 to 34 X 60	****	1.000	****	
100	96 x 60 to 40 x 60	****	5555	6664	2.65
	Double Strength.	****	***	5551	800
25	6 X 8 to 10 X 15	13.24	12.25	11.75	105. 5
39	11 X 14 to 15 X 24	14.50	13.25	12.50	11.2
40	10 X 24 to 30 X 39	17.25	15.75	14.00	***
54	15 X 84 50 24 V 30	19.75	17.35	14-50	***
90	20 X 28 TO 24 X 36	31.00	18.40	15-75	***
70	10 X 10 to 20 X 44	23.25	21.25	17.25	865
90	20 X 40 to 30 X 40	24.00	22.50	18.00	5 1 5
-94	30 X 52 50 30 V 54	25-75	23.25	19.24	***
90	30 X 50 TO 34 X 46	37.75	25.00	21.74	
94	34 X 58 to 34 X 60	29.25	27.75	34.00	
ICO!	36 x 60 to 40 x 60	33.25	30.00	27.75	

James & Co  Double Bit, Lippincott  Drain Tools, list	15,00
Hoes, Planters'  Scovill Pattern  Handled, Square Eye, German	dis 6c% dis 6c% dis 5c%
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Long. Cross Cut, H. B. & Co., Champion, Bet. Cross Cut, Lippincott, Champion.	Per ft. \$0.35
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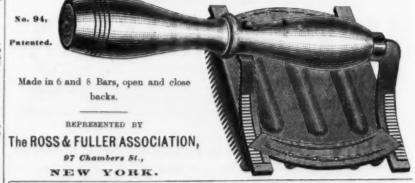
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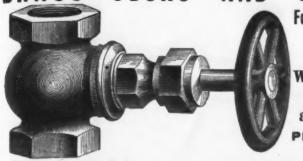
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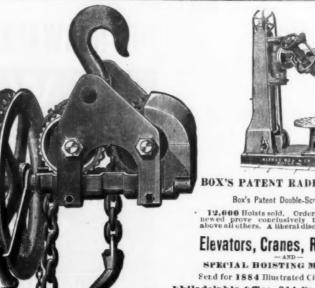


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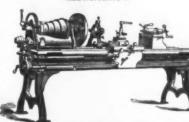
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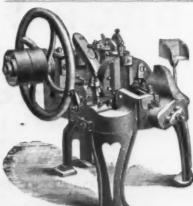
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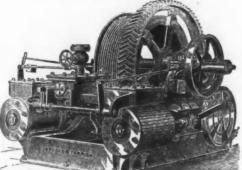


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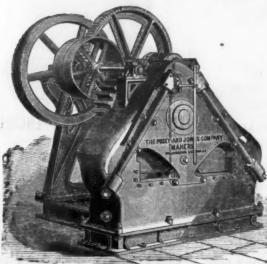
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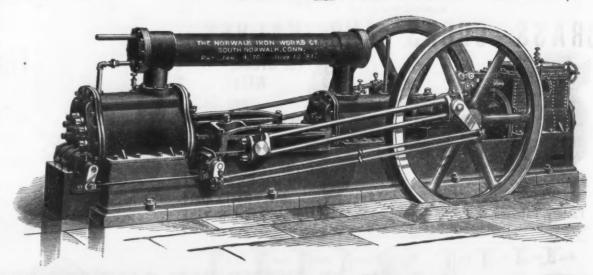
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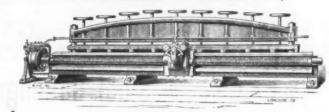


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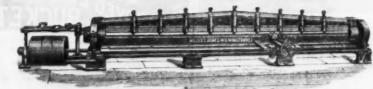
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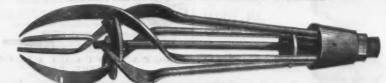
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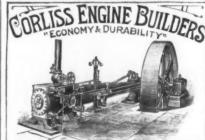
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